JUNE • 1940 • 25c

LANCASTER COUNTY
MEDICAL SOCIETY

THE HEALTH MAGAZINE

HYGEIA

In this issue—

$500 CONTEST WINNERS!

" . . . to devote myself to the welfare of those committed to my care"

—from the Florence Nightingale pledge.

THESE YOUNG WOMEN are student nurses.

They have been selected from many applicants, for the modern hospital chooses its nurses with the greatest care. To begin with, they must be at least 18 years of age . . . must have a high school education, or more . . . must bring to their profession patience, tact, and a high degree of aptitude. And before they win the right to wear the graduate nurse's cap they must complete a rigorous 3-year course of study and training.

And yet, the rigid standard which the modern hospital maintains in the education of its nurses is only *one* of the reasons which make a hospital the best of all possible places for you to be when you are ill.

For within its walls—cellar to roof—every foot of space has been planned for this dual purpose: *relief of human suffering* and *restoration to health.* Here, in this little world apart, is the *one* place where your doctor finds the modern medical and surgical equipment so often necessary to make his efforts most effective.

Under this roof, dark and daylight lose their meaning. For internes and nurses stand always ready to perform your doctor's orders. And with them, ready for every need, are pharmacists . . . dietitians . . . laboratory experts.

If you are unfamiliar with the working of a modern hospital, take a few hours off some day soon, and visit your local hospital. You will be made welcome—warmly and sincerely. Inspect the equipment . . . talk to the devoted men and women you will find there.

You will come away with the feeling that a hospital is not only a place of marvelous efficiency, but a haven of friendliness for those who are sick.

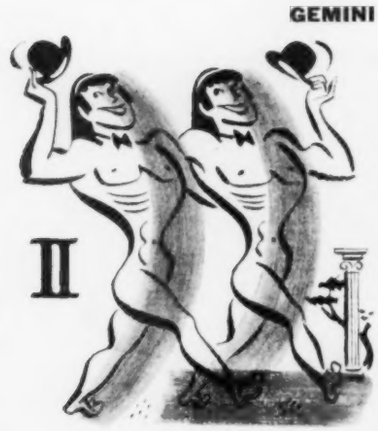
Copyright, 1940, Parke, Davis & Co.

PARKE, DAVIS & COMPANY
Detroit, Michigan

The World's Largest Makers of Pharmaceutical and Biological Products

BABIES SUPERVISED BY PHYSICIANS ARE BETTER BABIES

Copyright 1940, Mead Johnson & Company, Evansville, Indiana, U. S. A.



FORECAST FOR JULY

The final triumph of "School's out!" is often shattered a week or two after vacation really begins. Why? Because boredom intervenes, and "What'll we do first?" is replaced with just, "What'll we do?" But here is the answer to those persistent questions, and it's contributed by Regina J. Woody, well known to HYGEIA readers for her practical suggestions for meeting many other situations calling for a Plan. She calls the article "Summer's Here" and in it gives enough ideas to keep your own children and all your neighbors' on the go from Decoration Day to Labor Day. Don't miss it!

Between the ages of 3 and 18, no disease causes as many deaths as do accidents, and in many of these accidents the ultimate result as regards life, loss of limb or permanent crippling depends on the first aid given. Robert H. Kennedy, M.D., explains how a simple fracture may—with unwise, though well meaning aid—develop into a compound fracture, an accident often far more serious than the original. One of these days you may be that bystander and have the possibility of the victim's permanent crippling depend on your actions: Read Dr. Kennedy's article on "Emergency Care of Broken Bones," and find out what you should do.

There are literally thousands of persons in the United States who are working full time with one lung collapsed and many with both lungs partially collapsed. They are enjoying good health, and the tuberculosis from which they suffer is not contagious. This collapse treatment of lungs is the most widespread method of coping with this "Deadly Disease Number 6." And it is prolonging life and the potentialities of life's work many years beyond those which the germs of tuberculosis would often permit, if allowed to run their course. Next month, J. Arthur Myers, M.D., noted author, lecturer and educator, will explain this disease and what the medical profession knows about its treatment.

HYGEIA

THE HEALTH MAGAZINE

Published and copyrighted, 1940, by the American Medical Association. Edited by Morris Fishbein, M.D.

CONTENTS FOR JUNE

COVER ..... Kenneth Shopen

THE DEVELOPMENT OF A SURGEON — Editorial 486

HEAR AND NOW! ..... Austin A. Hayden, M.D. 488

YOUR WITNESS, DOCTOR ..... Peter J. Steincrohn, M.D. 491

MEDICAL CARE FOR ALL ..... John F. Austin 493

ANNOUNCEMENT OF CONTEST WINNERS 497

THE MODERN DOCTOR ..... Reginald Fitz, M.D. 502

CORRECTING SPEECH DEFECTS ..... James Sonnett Greene, M.D. 507

GRANNY MEDICINE ..... L. W. Bryce 510

BIRTHMARKS ..... Eugene F. Traub, M.D. 513

SOOTHING MEDICINE — A Poem ..... W. E. Farbstein 517

DEADLY DISEASE NUMBER 5: CEREBRAL HEMORRHAGE ..... Carl W. Apfelbach, M.D. 518

CHEMICAL CAPSULES ..... W. W. Bauer, M.D. 521

FLYING WITH EASE ..... Sibyl Winser Johnston 524

WONDER STORIES OF THE HUMAN MACHINE: IX ..... George A. Skinner, M.D. 526

FIRST AID FOR FAIR VISITORS ..... J. P. Hoguet, M.D. 529

HORMONES ..... Leona M. Bayer, M.D. 532

FOODS AND NUTRITION
- Iodized Salt 537
- Cold Facts About Ice Cream ..... Harriet Morgan Fyler, Ph.D. 540

VITAMIN A IN MILK 544

QUESTIONS AND ANSWERS 546

BOOKS ON HEALTH 552

CHILD CARE
- Diaper Data ..... William I. Fishbein, M.D. 556

MEDICINE IN THE NEWS — Radio Announcement 561

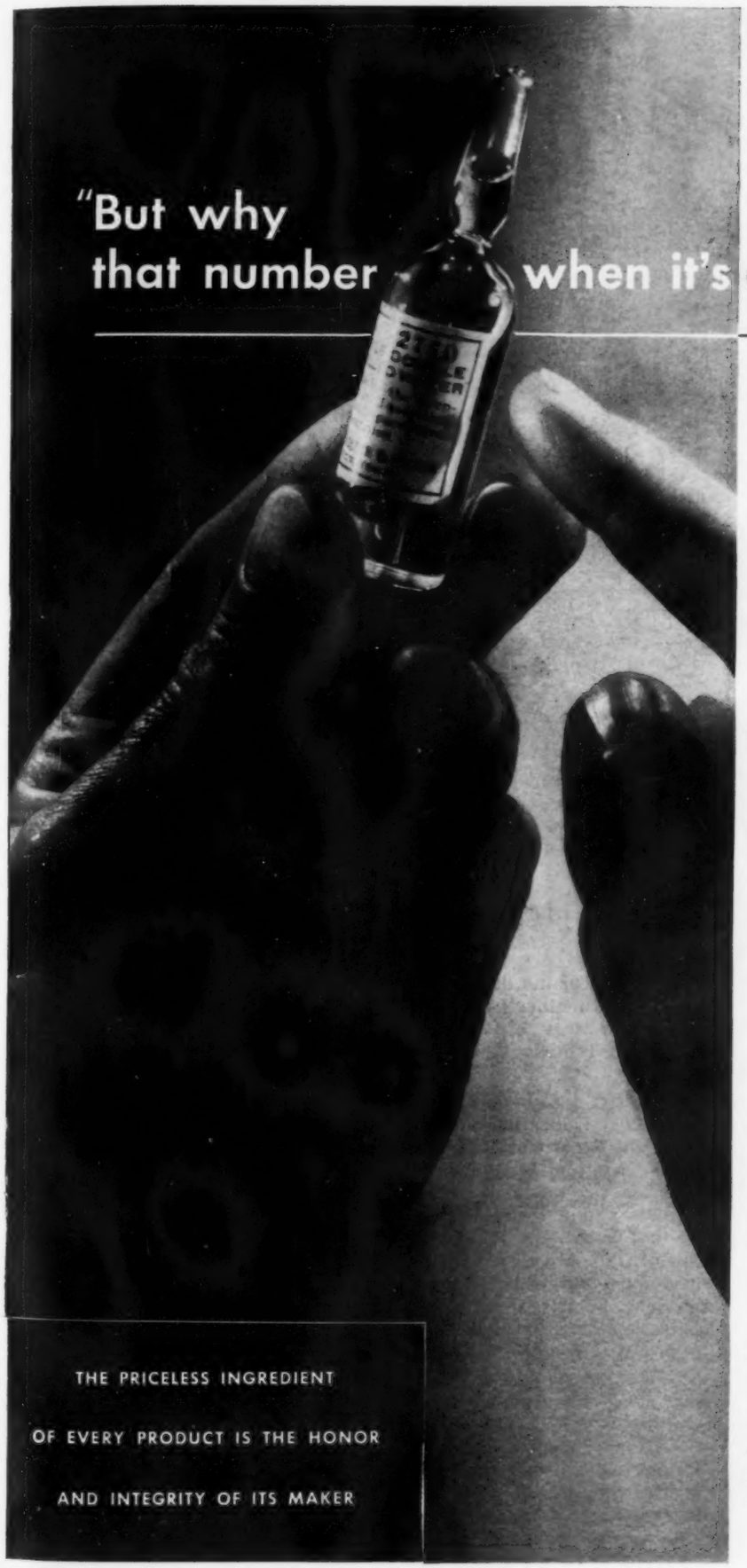
TEACHING HEALTH
- Graduated — with Cavities! ..... J. Mace Andress, Ph.D. 565
- Using Scientific Sources ..... Effie F. Knowlton 566
- The Modern Report Card ..... Charles R. Foster Jr., Ed.D. 568
- What Has Experience Taught Us? ..... John B. Dunne 570
- Let's Build a Sturdy Mansion ..... Alice P. Jarrell 572

MEDICAL NEWS OF THE MONTH 576

HYGEIA, The Health Magazine, is published monthly by the American Medical Association, 535 N. Dearborn Street, Chicago, Ill. Yearly subscription price, $2.50; for foreign postage add 75 cents. Single copies, 25 cents. Volume 18, Number 6. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Acts of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103 Act of October 3, 1917, authorized March 21, 1923. Printed in U. S. A.

Unsolicited manuscripts will be considered by the Editor but must be accompanied by a stamped self addressed envelop to insure return if rejected. Manuscripts should be typewritten, double-spaced, and the original, not the carbon copy submitted.

All rights reserved.



The speaker, a visitor at the Squibb Laboratories, was puzzled.

We had explained the control number that appears on every Squibb product. "It's a little like your birth certificate," we said. "Each Squibb product is born with an individual number that it keeps for life. Filed under that number at the Squibb Laboratories is a complete record of the product's manufacture—analysis of raw materials, names, dates, results of tests."

Said the visitor: "I can see the point of going to all that trouble on some life-and-death product. Or on one that is complicated in its formula. For then you need a system of rigid control at every point to make sure the product lives up to specifications. But why so much fuss about just a little distilled water?"

"In the first place," we told him, "that distilled water may well be a life-and-death matter. When a physician mixes a solution and injects it into the veins of a patient, the water from the ampule must not only be pure, but absolutely sterile.

"In the second place, Squibb believes that no product concerned with health is so unimportant that its making can be taken for granted. That is why you have the added protection of a control number on *every* Squibb product—whether it be an antitoxin administered by the physician, or a household necessity such as the Squibb Mineral Oil, Sodium Bicarbonate, Milk of Magnesia or Cod Liver Oil in your medicine cabinet."

E·R·SQUIBB & SONS

Manufacturing Chemists to the Medical Profession Since 1858

LETTERS FROM *Readers*

Evolution

To the Editor:

Why should an otherwise intelligent, scientific and well-liked journal, such as HYGEIA, The Health Magazine, find it necessary to quote with apparent approval what the "evolutionists insist"? I am referring to your editorial on page 391 of the May issue ["If the Shoe Fits"]. Quadruped theories and baseless hypotheses regarding man ill befit a paper such as yours. However, if you must quote evolutionists, I would suggest you introduce a new department—a comic section. Then your readers would understand your sense of humor. Why not guard consistently against harming the moral, mental and spiritual health of your reading public in America? Beware of the road that leads to weeding out processes and racial discrimination.

With some exception, such as the one just referred to, we like your papers very much. The picture on the cover of the May issue is worth an entire year's subscription.

ALFRED GILBERG, Pastor,
Lund Mission Covenant Church
Stockholm, Wis.

Other Readers Answer

To the Editor:

I have for many years read HYGEIA from cover to cover. I find it such an educational magazine for the layman that it seems indispensable for the welfare of the American Family.

It is most unfortunate that the person who complains about the lack of the M.D.'s after the name of an author-physician should criticize the beauty of "Health" displayed on your covers! Many a person has clipped these beautiful pictures for health books for children. It is through magazines such as HYGEIA that we get great help and comfort.

I trust that HYGEIA will continue to give what it has in the past and will not slip down to the place where a woman no longer cares for what they have to offer! Yours is a magazine that appeals to the intelligent woman.

FLORENCE AYCOCK-FLYNN
Harrisburg, Pa.

To the Editor:

I can't understand why you would make an exception and print the anonymous letter in your May issue.

I don't believe that any of your readers would be interested in the opinions of any one who was so "moronic" that they could not appreciate the picture on the cover of your May issue, as well as many of the preceding issues.

I am very glad to notice that so many schools are using your magazine, and I wish there could be some way devised to make this more universal.

M. K. STATON
Durant, Okla.

Thank You

To the Editor:

I am a student at Miami Senior High School. This semester I am in a class which requires each student to have a subscription to HYGEIA. I enjoy the magazine very much.

MARY LEW HOLMES
Miami, Fla.

Who's Who IN HYGEIA

AUSTIN A. HAYDEN, M.D., is president of the American Society for the Hard-of-Hearing. He is also the chairman of the committee of consultants on hearing aids and audiometers of the Council on Physical Therapy. His personal interest in the problems of the deafened originated in his mother's loss of hearing, which was of the chronic progressive type.

REGINALD FITZ, M.D., is on the Council on Medical Education and Hospitals of the American Medical Association, a group which sets the standards for medical training in hospitals and universities throughout the land. He is also a Regent of the American College of Physicians and a member of the American Society for Clinical Investigation. Dr. Fitz writes of the life of the modern doctor, page 502.

JAMES SONNETT GREENE, M.D., is medical director of the National Hospital for Speech Disorders, a medical institution founded by him in 1916 to be devoted solely to the diagnosis and treatment of voice conditions. Because speech defects are such a great handicap economically, over 70 per cent of the hospital's work is done free. Dr. Greene is the author of two books: "The Cause and Cure of Speech Disorders" and "I Was a Stutterer." He is also the author of several medical monographs on speech and voice disorders and editor of the hospital's monthly magazine "Talk." Dr. Greene's article, "Correcting Speech Defects" may be found on page 507.

EUGENE F. TRAUB, M.D., whose interest in medical matters lies in dermatology (the study of skin diseases) has written an article on the nature and elimination of birthmarks, page 513. He is a member of the executive committee of the New York Dermatological Society and chairman of the committee on admissions of the Academy of Dermatology and Syphilology. Dr. Traub is professor of dermatology at the University of Vermont and Chief of the Clinic in the Out-Patient department of the Skin and Cancer Unit of the New York Post-Graduate Hospital.

EYES...WHAT CARE DO YOU GIVE THEM?

You would be the last to deny the paramount importance of your eyes. Imagine, for one instant, your life without them . . . or their loss by anyone dear to you.

Too terrifying to contemplate! Yet . . . what are you doing to preserve this most vital, most precious sense? Do you give it even a fraction of the time and care you give to teeth, or skin, or hair? It takes so little to assure clear, comfortable vision.

How long since you've had your eyes examined? If day's end finds you tired, headachy, this may be your warning signal. If your husband comes home irritable, his nerves on edge, the cause may be his eyes. If your child is slow in school or backward in play, the fault may be his vision. And remember—in these days of rushing traffic—quick, sure sight is vital to his very life.

Only a competent examination can tell the true condition of your eyes. Make sure for yourself, for your family. Make an appointment now. Good vision means better health, greater happiness, a brighter future.

Where absorptive lenses are needed, Soft-Lite Lenses are often prescribed to provide protection against over-brightness. And, being inconspicuous, they're better looking.

Genuine SOFT-LITE LENSES are made by BAUSCH & LOMB *for the Soft-Lite Lens Company, Inc., New York, Toronto, London.*

The DEVELOPMENT of a

THE great Celsus, a Roman medical writer who lived in the first century, said of the surgeon, "He should not be old, his hand should be firm and steady, and he should be able to use his left hand equally with his right; his sight should be clear, and his mind calm and courageous, so that he need not hurry during an operation and cut less than required, as if the screams of the patient made an impression on him."

The surgeon of an earlier day was trained primarily in the structure of the human body and was much less concerned with its physiology than is the surgeon of the present. He was chiefly concerned with the removal from the human body of portions which had been so greatly damaged that they could no longer function or of portions which represented disease. Thus Charles Bell [1] in 1826 wrote, "All that is essential to the character of a good surgeon may be acquired. To think otherwise were as discouraging as untrue. The eye is in the mind. A learned eye is a discerning and a quick one. And his hand will not easily tremble who knows perfectly what the hand should do—what the hand may do." Moreover, Dr. Warren Stone [2] of New Orleans wrote, "I can take any butcher out of a butcher shop, and in a few months teach him surgical technic, so that he can do most of the surgical operations as well as a recent graduate in medicine. He will not know when to operate or what operation to do: he can only do the operation he is told to do. He will be a surgical technician, but by no stretch of imagination a surgeon."

Thus the surgeon of an earlier day was primarily a technician rather than a medical scientist. The fault lay, of course, not primarily with the surgeon but with the fact that medicine itself had not yet evolved into a profession which recognized the human body as a whole and which recognized the living body as merely the mechanism in which a human being with a personality functioned. This point of view Eugene H. Pool [3] recognized in his essay published in 1936 in which he said, "The history of surgery, as we know it, did not exist until the knowledge of bacterial influences and the development of anesthesia quickly changed a limited mechanical field into a vast science."

As modern surgery developed, surgical educators recognized the new point of view. Thus the young man who wished to be a surgeon in an earlier day devoted most of his time to the acquiring of technical excellence. Hours were spent day and night in the practice of rapid tying of knots. Much attention was given to the development of speed. Obviously, without anesthesia speed was a fundamental requirement. Quite soon, it was recognized that there could be individuals possessed of marvelous technical proficiency and yet have extraordinary rates of morbidity and mortality following their work. Such men could not be good surgeons, for there was absent from their makeup a significant ingredient—what an advertiser might well have called a priceless ingredient! This ingredient, known as character, includes a variety of attributes called characteristics, among which are knowledge, decency, the ability to think, judgment and the fear of God.

Gradually there came a change in the technic of the development of a surgeon; it replaced the mere surgical apprenticeship with a type of training which is now embraced in the requirements of the certifying board in this field. Briefly these requirements include satisfactory moral and ethical standing, membership in the American Medical Association or its equivalent, limitation of practice to the field of surgery, graduation from a recognized medical school and completion of a satisfactory internship. Next must come a period of special training in sur-

1. Cohn, Isidore: The Making of a Surgeon. The Mississippi Doctor 42-48 (August) 1938.
2. Dicks, J. W. D.: Surgical Judgment. The Southern Surgeon **6**: 427-430 (October) 1937.
3. Pool, Eugene H.: The Making of a Surgeon. Annals of Surgery **104**: 481-491 (October) 1936.

SURGEON

gery of not less than five years, during which the entire time must be devoted to surgical training, supplemented by experience in the basic sciences. The period of special training must be of such character that the relation of the basic sciences of anatomy, physiology, pathology, bacteriology and biochemistry is emphasized. The training may include a year in an acceptable graduate school, a residency of two years and an assistanceship of two years. The examinations are planned to verify fully the qualification of the young man to whose brain and hands will be entrusted the life and future of many a human being.

During the past ten years the trend toward such standardization for the practice of surgery became clearly apparent, as reflected in the medical literature during that period. Thus Dr. L. E. Burch [4] wrote in 1930, "The essential to be desired in the training of the young surgeon is surgical judgment. A large element of surgical success must depend on the accuracy of the preoperative information." Dr. Hubert A. Royster [5] said in 1932: "What may be called the mechanical side of surgery is not without its need of an understanding vision. Surgery is not wholly mechanical. Surely it is not all of surgery to cut, nor all of operating to perform the operation."

In 1936 Dr. Robert B. Greenough [6] wrote, "The science and art of medicine is of necessity so little understood by the laity that they are obliged to entrust their lives and their welfare to the physician rather upon faith in his character and reputation than upon actual experience of his abilities. Thus, conscience becomes one of the most important elements in the character of the physician. Especially is this true as regards the surgeon."

4. Burch, L. E.: The Surgeon in the Making. J.A.M.A. **94**: 757-758 (March 15) 1930.
5. Royster, Hubert A.: Surgical Vision. J.A.M.A. **99**: 93-95 (July 9) 1932.
6. Greenough, Robert B.: The Conscience of the Surgeon. Surgery, Gynecology and Obstetrics **62**: 390-394 (February 15) 1936.

More recently, in 1937, Dr. Harvey B. Stone [7] said, "Most of all we need the large view, the wide horizon; not only facts and knowledge gathered from many fields, but the sense of proportion, of balance, of sanity, that comes from seeing life, surgery and ourselves in true relations and proper setting." And in November 1937, the young Gatewood,[8] whose untimely death closed too early a great surgical career, remarked, "Technical excellency, the marvel of the undergraduate and the envy of the young surgeon, is of only relative importance and is the natural result of adequate training. It should always be subjacent to surgical judgment. It is vastly more important to stimulate an inquiring mind to reason than to train the willing hand to manual dexterity."

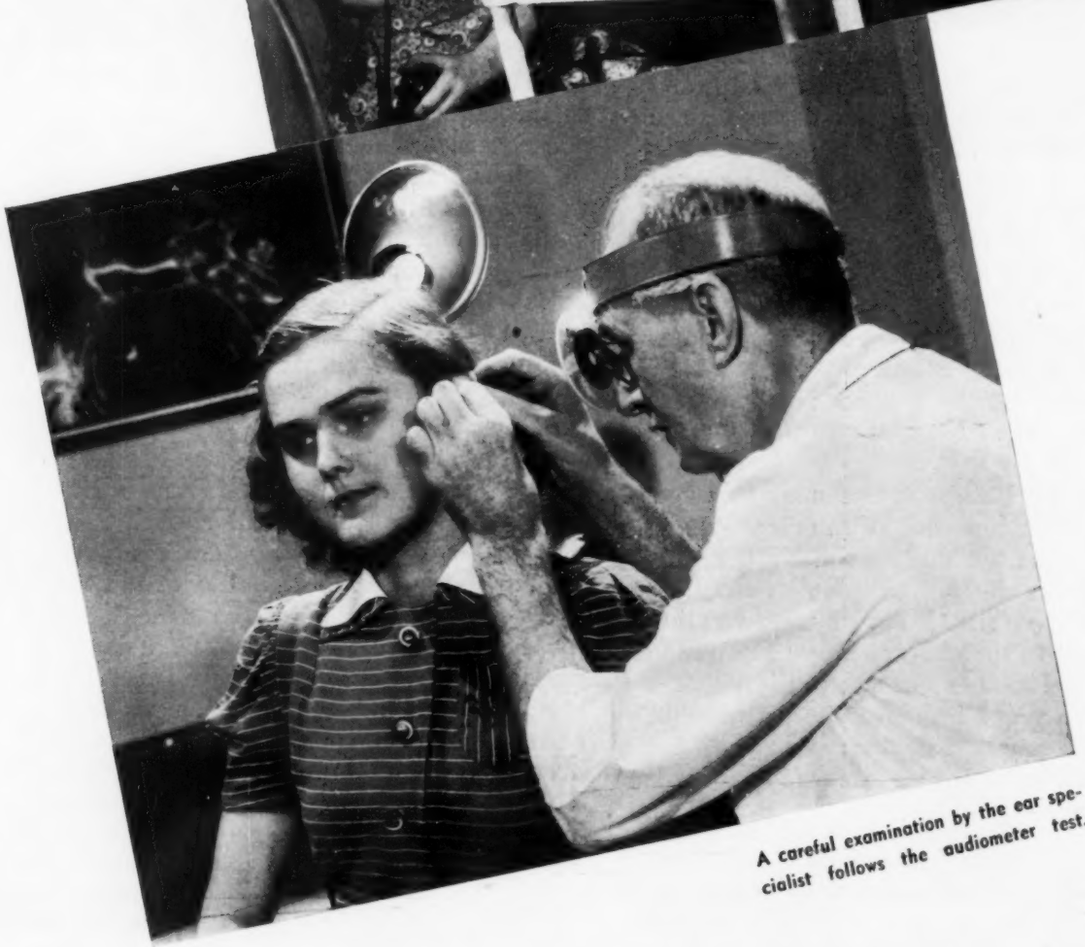
Certainly if there is one field of medicine in which character is the prime requisite, it is in the field of surgery. The true surgeon represents, regardless of what many of us are inclined to doubt, the acme of medical training. It was to the surgeons that Rudyard Kipling said, "Is it any wonder, gentlemen, that your calling should exact the utmost that man can give—full knowledge, exquisite judgment and skill in the highest to be put forth, not at any self-chosen moment, but daily at the need of others? More than this: Your dread art demands the instant impersonal vision which, in one breath, one beat of the pulse, can automatically dismiss every preconceived idea and impression, and as automatically recognize, accept and overcome whatever of new and unsuspected menace may have slid into the light beneath your steadfast hand.

"But such virtue is not reached or maintained except by a life's labor, a life's single-minded devotion. Its reward is not only the knowledge of mastery and gratitude of the layman, which may or may not bring content. Its true reward is the dearly-prized, because unpurchasable, acknowledgement of one's fellow craftsmen."

It is significant that the surgeons themselves have done most to raise the standards in the ethics of their own specialty. They insist on competence and on honor. Without these attributes no man can ever be a great surgeon.

7. Stone, Harvey B.: Wider Horizons for the Surgeon. Annals of Surgery **105**: 641-646 (May) 1937.
8. Gatewood: The Making of a Surgeon. American Journal of Surgery **38**: 397-406 (November) 1937.

By means of the audiometer, the exact degree of hearing deficiency can be determined.



A careful examination by the ear specialist follows the audiometer test.

The hearing devices are inconspicuous.

HEAR and NOW!

By AUSTIN A. HAYDEN

TO many millions of persons in the United States, the pleasurable din of daily activity is blurred, confused or diminished by some defect of hearing. Voices of friends and family are indistinct; music is scarcely audible; whole registers of sound are not heard at all. Life is a silent movie, or one in which the sound-track is badly out of gear.

People with hearing losses are of two types: the "deaf" and the "deafened." The truly deaf are a relatively small group of persons who were born without hearing organs or whose auditory powers were destroyed before they learned to talk. These persons must be educated in special schools; their problems are comparable to the problems of the blind. In sharp contrast are the millions of deafened persons with varying degrees and types of impaired hearing, who form an exact parallel to those who must wear spectacles to compensate for some defect in vision.

The good news is that practically all these handicapped persons can definitely be helped by recent advances made in the diagnosis and treatment of deafness!

To understand the problem of deafness, we must first familiarize ourselves with the structure of the ear—the most intricate organ of the body. "How we hear" is an amazing and complicated story. Before a sound wave can be recorded on the brain, it must pass through three labyrinths: the outer, middle and inner ear. The visible shell of the outer ear is a trumpet, a trap to catch sound waves and direct them to the eardrum, a white membrane stretched tightly across the entrance to the middle ear. Sound waves striking the drum set up vibrations which are transmitted through three delicately-linked small ear bones or ossicles, the hammer, anvil and stirrup. As the eardrum vibrates, it sets the hammer in motion: Like a tapped telegraph key, the hammer strikes the anvil. This impact impresses the stirrup-shaped bone against the "oval window" connecting the middle and inner ears.

Now at this oval window a remarkable thing happens. Because the inner ear is filled with fluid, the air vibrations from the outer world are converted into fluid vibrations; this conversion takes place lest the inner ear be assailed too loudly or directly by sound. These fluid-borne vibrations are transmitted to the cochlea, a snail-shaped bone the size of a pea, strung like a microscopic piano with 24,000 feathery nerves. And now in mysterious

fashion, the cochlea transforms these fluid vibrations into electrical impulses, which finally travel up the filaments of the auditory nerve to the brain. Thus we hear.

Small wonder that this elaborate mechanism should go askew at certain points, or that after 50 years of unfailing service the sensitive nerve-receptors should become somewhat dulled. The middle ear especially is subject to disorders; here, most hearing impairments are found. But why should the middle ear be the favorite seat of hearing troubles? Well, every time we breathe, a fresh supply of air is drawn into the cavity of the middle ear through the Eustachian tube leading from the nasal passages. This tube is a streamlined highway for germs migrating from the nose and throat. Chronic colds, sinus infections, common diseases of childhood inflame the membranes lining the Eustachian tube, blocking it and thus shutting off the essential breath of the middle ear. Pressure within the ear becomes unequalized, the eardrum is sucked inward, and the functioning of the ossicles is impeded.

Other contributory causes of middle ear trouble can be enumerated. Swimming and diving even in pure water open avenues of infection that facilitate middle ear infections. Poor food often means poor hearing; tests on 100,000 English school children demonstrated that middle-ear deafness is four times more prevalent under poor social conditions than good. Continuous changes of atmospheric pressure contribute to chronic middle ear infection among plane pilots.

But the main cause of deep middle-ear deafness suffered by several million persons (mostly beyond the age of 40) is otosclerosis, a bony overgrowth which locks the stirrup bone to the "oval window." Blame for this condition is laid chiefly to heredity or perhaps to an abnormal parathyroid gland which deposits excessive quantities of calcium in the wrong places. We shall see how skilfully modern hearing aids can help these sufferers.

Comparatively rare is deafness caused by damage to the inner ear, where cochlea and auditory nerves lie protected deep in the skull. Yet inadequately treated syphilis and cerebrospinal meningitis can attack this region and impair the auditory nerve. So can tobacco or alcohol poisoning and also that most prevalent of modern injuries, the motor accident with its frequent skull fracture. Then too, diseases of the middle ear have a formidable habit of encroaching on the internal ear, complicating the problem of aiding the deafened person. When the auditory nerve is destroyed by accident or disease or when a baby is born congenitally deaf, lip reading is the best method of salvation.

Until twenty years ago, the deafened person either ignored his impairment, thus inflicting an intolerable burden on his friends and family, or he clung resignedly to a despairing solitude. In addition to the ear trumpet, ugly and cumbersome, only one type of hearing aid was available: a portable one-way telephone system, offspring of Bell's original device, crude in design, massive in construction, limited in range, awkward to wear. Deafness was accompanied by inevitable psychologic depression, gloom and oversensitiveness. Jobs were lost, and the deafened were greeted with pity or hostility. The strain of not hearing well brought fatigue, impaired digestion, poor general health, a grouchy disposition and the misery of isolation. Nine tenths of all that's said may not be worth saying, but one feels abused unless he can hear it. Those with impaired hearing were doomed to an invisible cage of hopeless silence.

Into this world of shadow, scientists and physicians began in 1922 to cast rays of hope, chiefly by means of vast improvements in electrical hearing devices. In the past two decades, hearing aids have reached such a state of perfection that the vast majority of deafened persons can now be fitted with a device closely adapted to their individual needs.

Hearing devices work on either of two principles: bone conduction and air conduction. The air-conduction instrument merely amplifies sound; that is, it increases the intensity of the sound waves as they strike the ossicles of the middle ear. Alexander Graham Bell's original hearing aid, invented in 1871, worked on the air-conduction principle. Seventeen years ago, Western Electric added an amplifier to this so-called "carbon" type of transmitter. The first amplifier weighed more than 200 pounds and cost $1,500. The present "carbon" amplifier is about an inch in length, weighs about 4 ounces and has achieved remarkable results in quality and volume of sound, bringing nearly normal hearing to thousands of deafened persons. Instruments with such amplifiers cost approximately $100; the upkeep is about $25 annually for new batteries.

In cases where the tiny ear bones are locked fast, air conduction is unavailing, and a bone conduction device is prescribed. Otologists [ear specialists] have long realized that the bony structure of the *(Continued on page 574)*

Your Witness, Doctor!

By PETER J. STEINCROHN

"Talk to him of Jacob's ladder
and he would ask the number of steps."
—*Jerrold.*

WHY does your doctor have such a large inquisitive bump? Why must he pry into the highly personal affairs of your private life? Why must you sit there and fidget in an uncomfortable chair? Nobody likes to tell everything that has happened to him today, yesterday or twenty years ago.

But there sits the doctor, sometimes grim and at other times with forced smile saying such things as: "Come, come you must tell me everything; otherwise I cannot help you." And so on and on for thirty minutes to an hour.

Dear patient, there is a reason for all this. Your doctor works like a detective. He is, in reality, a detective M.D. Every little thing you say may point the way to the culprit who is causing your illness. He may pounce on a bit of your history which may have seemed unimportant to you. He will ask you to repeat a statement again and again in so many different ways that he appears to milk every last bit out of it. Then he will jump off on another tack.

I used to have a professor of medicine who said that if he had to choose between examining a patient or taking a careful history, he would choose the history. He could make a correct diagnosis often without laying hand or instrument on the patient. Experience has confirmed the truth of his remark.

Sometimes physical examination yields absolutely nothing. The positive signs of disease may not rear their heads until valuable months have slipped by. But symptoms often come early to warn against illness. They are like the small white capped waves which appear hours before the onset of a storm at sea.

Beware of any doctor who sits you down for examination without taking the time and interest to question you thoroughly. Especially is this true when you have visited him the first time. Your body and you are absolute strangers to him on this occasion.

If he appears disinterested or too busy to question you thoroughly, you are placing your health and life in jeopardy. No physician,

There sits the doctor, sometimes grim but always patient, saying, "Come, come, you must tell me everything; otherwise, I cannot help you." The doctor must not become weary of asking questions, for on this depends the welfare of his patients.

however great his experience or reputation, can do what he should for you if he does not bombard you with questions.

I admit readily that there are some medical crimes which do not require extensive search for clues. If you have a typical attack of appendicitis, at times all that is necessary is to find a sensitive spot on the right side of your belly which reacts in a typical way to the doctor's fingers. Moreover, if you inform him that you have had pain and vomiting, the good physician or surgeon will send you to the hospital immediately for operation. Questions at this time are superfluous—there is no mystery here.

But usually, disease cannot be discovered so easily. It hides entirely or is present in some guise that requires much energy and patience to root out.

For example, suppose you are admitted to the consultation room complaining of a cough that you have had for the past few months. I shall enumerate some of the conditions which may cause this cough before you go on with your story. They flash through the doctor's mind, but he must be impartial with them. He must not say what your disease is until he is quite sure.

The following conditions might cause your cough: an ordinary cold; lung abscess; tuberculosis; cancer of the lung; bronchiectasis [a disease in which the patient brings up generous quantities of sputum every day]; inflammation of the trachea; heart trouble; aneurysm [a blood-filled sac] of the aorta; cigaret cough; sinus trouble; abnormally long uvula [that little elongated bit of tissue which hangs down in the back of your throat], and pneumonia. Yes, many patients have walked into a doctor's office with pneumonia, without being aware of it.

The patient thinks all he has to do is tell the doctor he has a cough, and out comes a bottle of vile tasting sirup, and then the cough will disappear. Fortunately, this is all that is necessary in the treatment of some coughs. But the doctor must be certain that it is not one of the more serious conditions just enumerated.

You do not realize that the mind of the good diagnostician is soon cluttered with clues of all sizes, shapes and colors which he must literally drag out of you with questions. Then he must sort these out and through a process of exclusion (gained by long clinical experience) be able to throw many out the window of his consciousness. Only then, can he say decisively that you do not have tuberculosis, pneumonia, lung abscess or heart trouble. Yours is only a simple cough, he will tell you, which should be brought under control without much difficulty. To make such a decision and be fairly certain about it, the complete cross examination of the patient is absolutely essential. Even such seemingly unimportant questions as the state of your grandfather's health cannot be disregarded.

If the doctor asks you no questions, but just reaches for his stethoscope to listen in for a few minutes; if he exclaims emphatically, "My dear, you have no tuberculosis"; if he says this without having suggested an x-ray or sent the sputum to the laboratory—then say goodby, sweetly, but never let his office doors darken you again. Avoid him. He is not for you or any one else. No doctor can be certain about what you have or have not with that kind of examination.

It is difficult and tiring for the doctor to keep questioning patients all day. Yet he must not become weary of this if he is to practice good medicine and give you every chance for health and life. But *one* question with the typical answer may enable him to track down an early cancer or tuberculosis. The patient must be questioned to eliminate the possibility of serious trouble.

I can do nothing better for you than to say, beware of the doctor who asks no questions. Your doctor should have a curiosity about your father, mother, brothers, sisters, husband, children and grandparents. He should be interested in how much you drink, smoke, eat and rest. If he does not want to know the nature of your work or how hard or long you work, shun him. If he is not curious about what sickness you have had at any time in your life, run from him. If he has not asked you if you are happy, and if not, why not, never see him again. If he pries into your marital relations, forgive him. If you mention headache, and he fires questions at you from all angles giving you a bigger one than you had when you first came in to see him, remember that he is on the way to complete a good job.

It seems silly for him to ask: When did you first have a headache? Is it the painful or dizzy type? Does it waken you from slumber? Is it bothersome in the morning or afternoon? Does it nauseate you? Is it worse at the time of your periods? Is it aggravated by constipation? When did you last have your eyes examined?

You are getting tired of it all. You wonder why he is wasting your time. As it is late in the afternoon, you can *(Continued on page 536)*

MEDICAL CARE for ALL

By JOHN F. AUSTIN

ON A stormy winter's night in 1936 seven cars, one by one came to a crunching stop at the snow-filled curb in front of Dr. Smith's house. One by one, seven doctors entered the home of their fellow physician for a consultation over a complex problem. The question did not concern the condition of one patient but a vast number of persons; it did not concern a means of arriving at a scientific diagnosis, but rather one of medical economics, namely: "What can we do to provide medical service for the 'borderline' patient—the patient in the low income group?"

These eight physicians, representing specialists and general practitioners, comprised the Medical Economics committee of the Sedgwick County Medical Society in Wichita, Kan.

The opinion commonly shared was that the real problem in the field of medical care lay not with the pauper or indigent class but rather with this marginal group, whose resources placed them only slightly above the relief category. It was true that many of these persons were being seen at the free clinic maintained by the county and staffed by members of the medical society. Some rightfully belonged there, others did not. On the other hand, there were undoubtedly many who through pride or circumstance did not obtain free care and hence went without needed medical attention.

Some of these "borderline" breadwinners had held reasonably good jobs before the

economic upheaval of the thirties turned them loose to find other means of livelihood. Many had been skilled workers, many day laborers who had been self sufficient. Some were of the type for whom employment had always been an intermittent thing. Many were on the WPA lists.

Could a plan be evolved by which these people could be assured a means of obtaining medical care when they needed it? Could a plan be devised whereby they could pay for services rendered on a reduced fee basis compatible with their ability to pay? These eight physicians believed such a plan could be effected.

As an outgrowth of this winter night's discussion, early conferences were held with representatives of the Wichita Community Chest, and valuable assistance and information were gained from this organization which was dealing with broader aspects of the same problem. Information from various parts of the nation was gathered and studied, but it soon was evident that no existing plan would fit perfectly into the local situation, for like so many socio-economic problems, it was peculiar to its own community.

On March 15, 1937, in this midwestern city of 115,000, the product of these months of study and planning took form as the Medical Service Bureau. The bureau was established in connection with the executive offices of the medical society which employs a full-time nonmedical secretary. As supervisor of the Medical Service Bureau an experienced medical social worker was selected. The medical society furnished the office space and necessary equipment and supplies. The Community Chest paid her salary.

One client visited the bureau on the opening day. He was a truck driver who was having trouble with a hernia. His employer had read

"You are pretty well dressed for a five-dollar-a-week man. Are you sure that is all you make?" she asked, scanning his attire. "Well, sometimes I make more than that," he confessed sheepishly.

of the bureau in the morning paper and sent him there to see what could be done. He was referred to the physician of his choice, and treatment was secured. In the three and a third years the bureau has been in operation, it has handled more than 3,100 cases seeking medical or surgical attention. The number of requests for service averaged forty-six cases a month during the first year of operation. During the second year, as the plan became more widely known in the community, the number of persons seeking aid increased to 117 a month.

How does the bureau operate? How do prospective patients reach a physician? How much do they pay for their medical care? What is their reaction to the plan? What is the doctor's reaction?

The Medical Service Bureau operates on the principle that individuals in this borderline group are for the most part self-reliant persons who want to assume their responsibilities themselves as far as it is possible for them to do so. The bureau helps them help themselves in securing medical care.

This medical aid office might be compared with a train operating between two points. At one point we find the client who is in need of medical or surgical treatment. At the destination point we have the doctor who is prepared to give the service. The Medical Service Bureau is the conveyance by which demand is brought to the source of supply.

Persons seeking the assistance of the bureau are referred to it by various community agencies, school nurses and by physicians, and many come because they have learned of the bureau through newspaper articles, from radio broadcasts or by word of mouth from their friends.

In the privacy of a small, neat, cheerful office the individual consults with the supervisor

of the bureau about his medical problems. Through means of this private informal interview the supervisor ascertains the individual's income or resources, his living expenses, his debts and other such pertinent information necessary in determining whether the client is rightfully entitled to assistance. It may develop that he is financially able to take care of his medical obligations and merely was trying to save money through this channel. Or it may be found that his current living expenses are such that he cannot afford to pay anything for medical service and should obtain his care through the county clinic or county hospital. But more than likely he will fall within the borderline group which can afford to pay a reduced fee for service.

Once the eligibility of the applicant is established he is asked whether he has or has had a regular family physician. If the answer is yes, he is referred to that physician. If it is no, he selects a physician. A copy of the report containing the social and financial picture of the individual is sent to the physician, so the physician may have the true perspective of his patient. The report states the amount of money the patient can reasonably budget for his medical care. In many instances it is only 50 cents or a dollar a week, but that half dollar or dollar represents an appreciable sum to the individual who has a family of four and earns $15 a week. The bureau does not set the fee; it merely sets forth the amount of money that can be allocated to medical care. The physician sets the fee.

Let us look in on the Medical Service Bureau office. In the large room which serves as reception space for the medical society offices and library as well as the bureau, there sits a middle-aged woman and child. The youngster, perhaps 10 years of age, sits nervously on the edge of her chair. Her braids hang over each shoulder, and her little cotton dress is spotless and immaculate. Betty, we shall call her, has been to the office before and was referred to her physician. She has come back with the news that her tonsils should be removed because they are impeding her general scholastic progress and causing a slight degree of deafness.

Betty's father is a clerk in a grocery store and earns $18 a week. There are three other children in the family, one of them younger than Betty. Betty's father is paying $12 a month on a small home he is buying at the edge of the city. The tonsil operation will cost $25, including the cost of using the hospital facilities.

Grace Dildine, supervisor of the Medical Service Bureau, talks with Betty's mother about the expense. Twenty-five dollars is quite a sum out of the family budget. Is there another way in which Betty might receive aid? Yes, the Wichita League for the Hard of Hearing will assist by paying $15 for the cost of the operation. Betty's mother says she believes they can take care of the hospital expense by making small weekly payments on the bill. Miss Dildine telephones Betty's doctor, and the operation is scheduled for the following day.

In contrast is the case of Mr. Jones. Jones is a slovenly appearing man of perhaps 50. He complains of back pain. Has he been to a doctor? No. Has he been to the county clinic? No. Is he working? Yes, he earns $5 a week as an attendant at a parking station. Does he have a family? No. Jones is dismissed with the instruction to return the next day to find out what can be done for him. In the meantime Supervisor Dildine calls the central application bureau at the county welfare department, through which all persons seeking assistance must pass for approval or rejection.

Yes, Mr. Jones has been to the county clinic many times. There is nothing wrong with his back or kidneys. He is an out-and-out malingerer. Mr. Jones was removed from the relief rolls when it was discovered he had $1,500 in a bank in a nearby Kansas village. But there is only an occasional Mr. Jones.

Oscar, a Negro waiter in one of the hotels, proved an amusing case by his sins of omission. Oscar thought he was suffering from a slight case of the "miseries" and ought to have something done about it. Oscar said he did not make much money.

"How much do you make a week?" the supervisor asked him.

"About five dollahs," he replied, chuckling.

"What do you mean, 'about five dollars'? Do you make more than that?"

"No ma'am," he replied.

"Are you sure? You are pretty well dressed for a five-dollar-a-week man," she added, scanning his attire.

"Well sometimes I make more than that," he confessed sheepishly.

"How?"

"Beg pardon?"

"I say how do you earn it?"

"Oh," replied Oscar, "shootin' craps."

"How much do you win a week at that?" asked Supervisor Dildine.

"About ten dollahs, ma'am. Only sometimes I lose . . . but not very often." So Oscar, being an independent soul, *(Continued on page 559)*

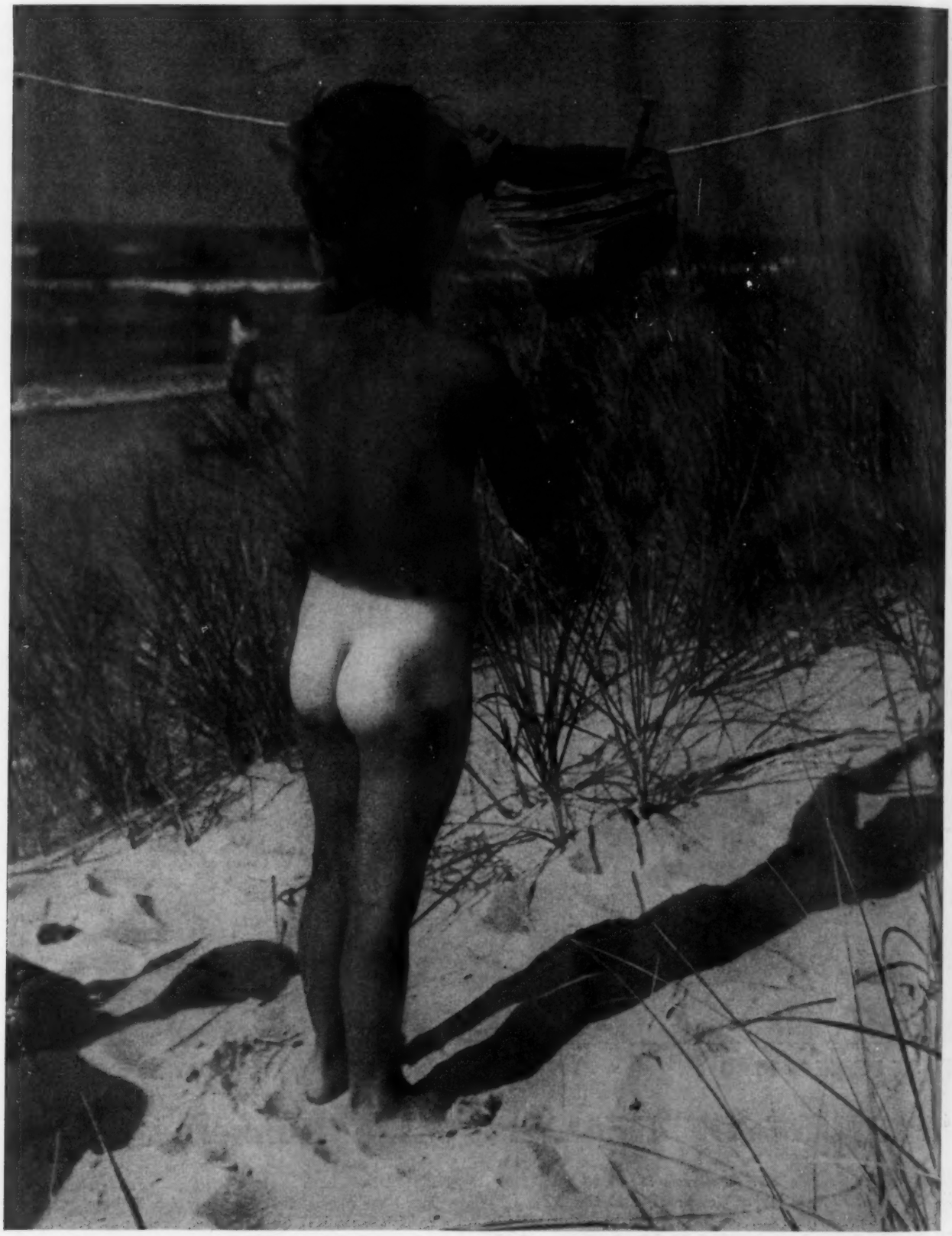
FIRST PRIZE - - $200 **William Perlitch**

"PICTURE OF HEALTH" *Prize Winners*

FIRST—William Perlitch, *2541 N. Marston St., Philadelphia*..$200
SECOND—Mrs. Adalaide Pilcher Welzenbach, *1320 Linn St., Peoria, Ill.* $100
THIRD—John George Despeaux, *206 E. 32nd St., Baltimore*....$ 50
NEXT FIVE—$10 each
Harry Brouhard, *1132 N. Warman Ave., Indianapolis.*
C. W. Eddy, *College Station, P. O. Box 8, Pullman, Wash.*
Fred Kinghorn, *1510 E. 49th St., Indianapolis.*
John E. O'Brien, *7609 34th Ave., Jackson Heights, N. Y.*
George A. Smith, *213 E. State St., Quarryville, Pa.*

NEXT TEN—$5 each
Mrs. Harry Aldrich, *6848 Wentworth Ave., Chicago.*
Rudolph Boger, *3111 Glenwood Road, Brooklyn, N. Y.*
Robert L. Diffendal, *345 Kenilworth Ave., Dayton, O.*
William E. Hoehn, *210 Alden Rd., Carnegie, Pa.*
Stanley Kenn, *2943 McPherson, Detroit.*
Joe Lorber, *230 Orchard St., East Lansing, Mich. (2 Prizes).*
Gordon Ludwig, *46-17 194th St., Flushing, N. Y.*
Ralph W. Marks, *7655 S. Park Ave., Chicago.*
Bradley Smith, *602 Third St., Hot Springs, Ark.*

(Continued)



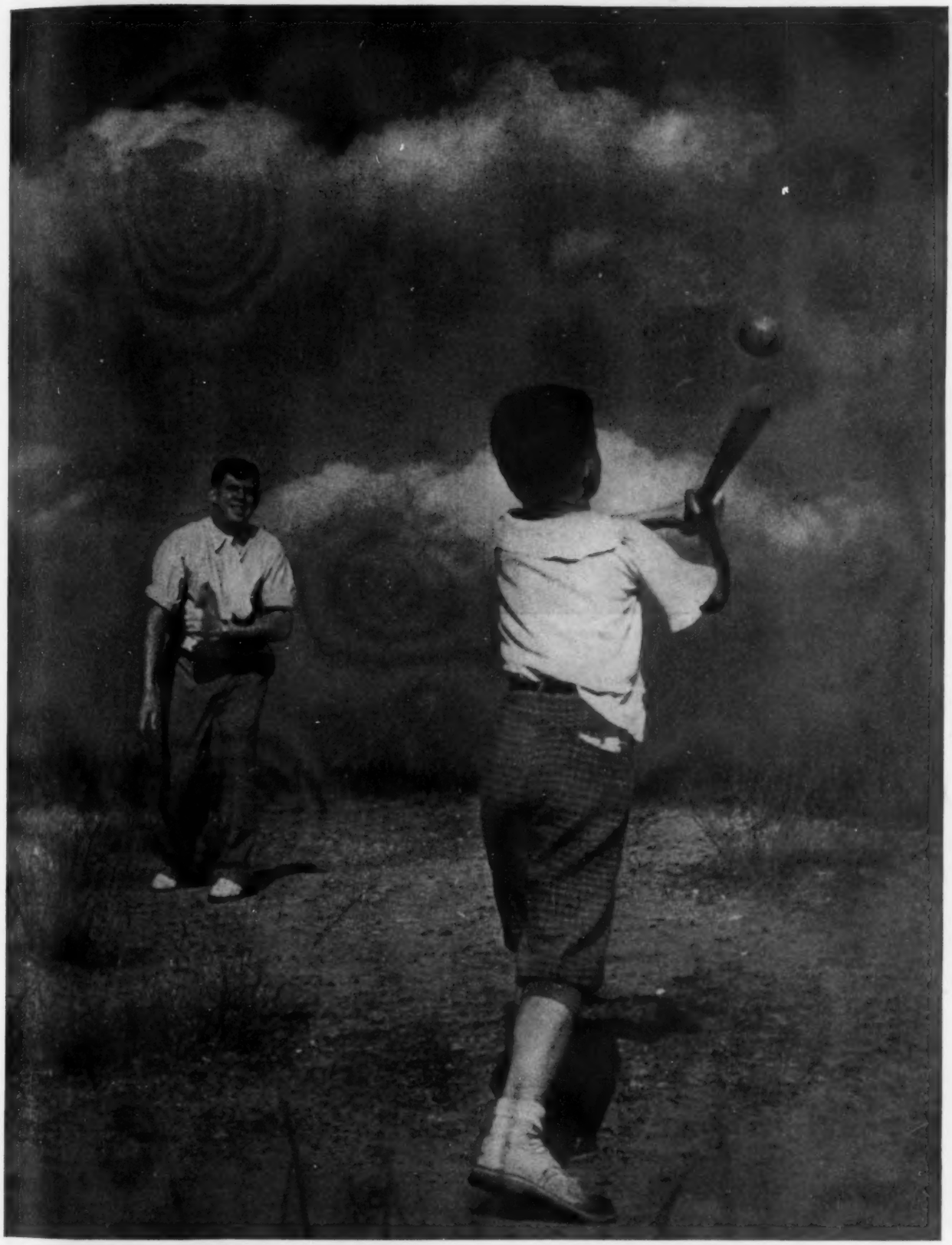
SECOND PRIZE - - $100

Mrs. Adalaide Pilcher Welzenbach

NEXT TWENTY-FIVE—$2 each

Dewey Atkinson, *111 E. Gorham St., Madison, Wis.*
Carl Bach, *Hotel Peter Stuyvesant, New York City.*
Edward Bady, *92 Fifth Ave., New York City.*
Leonard Becker, *5224 Gainor Rd., Philadelphia.*
Carl Berger, *Pelham, N. Y.*
Robert Blackmore, *3031 Cleveland, Kansas City, Mo.*

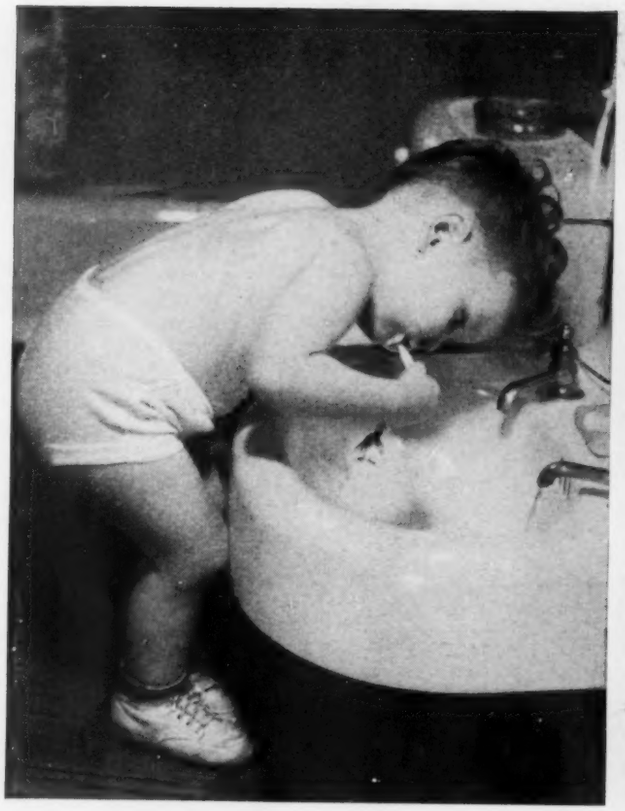
(Continued)

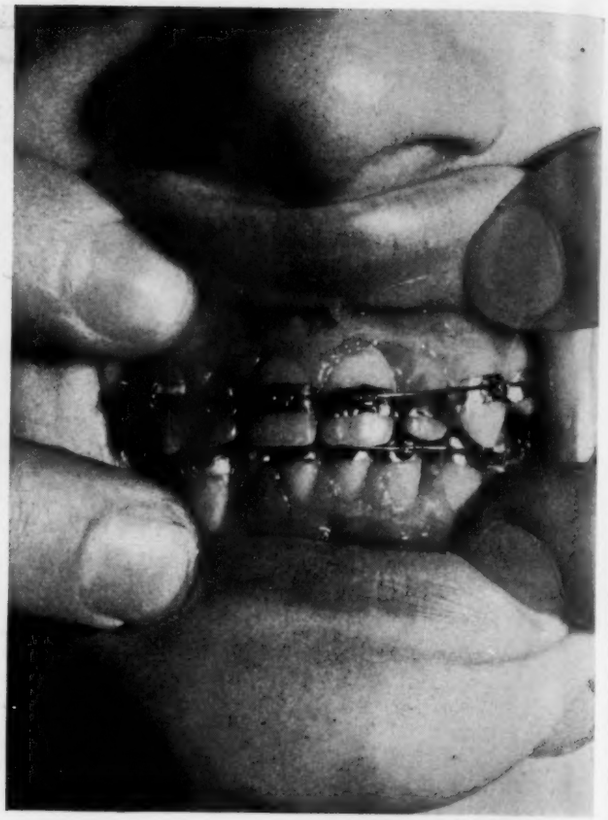


THIRD PRIZE - - $50 **John George Despeaux**

James Brucklacher, *838 Washington Ave., Findlay, O.*
Leon Cantrell, *938 Woodland St., Nashville.*
Helen A. Dye, *345 Louise Ave., Highland Park, Mich.*
Anna Fletcher, *211 Church St., Saratoga Springs, N. Y.*
William L. Funkhouser Jr., *511 Doctors Bldg., Atlanta, Ga.*
S. Jackel, *4036 Duane, Detroit.*

(Continued)





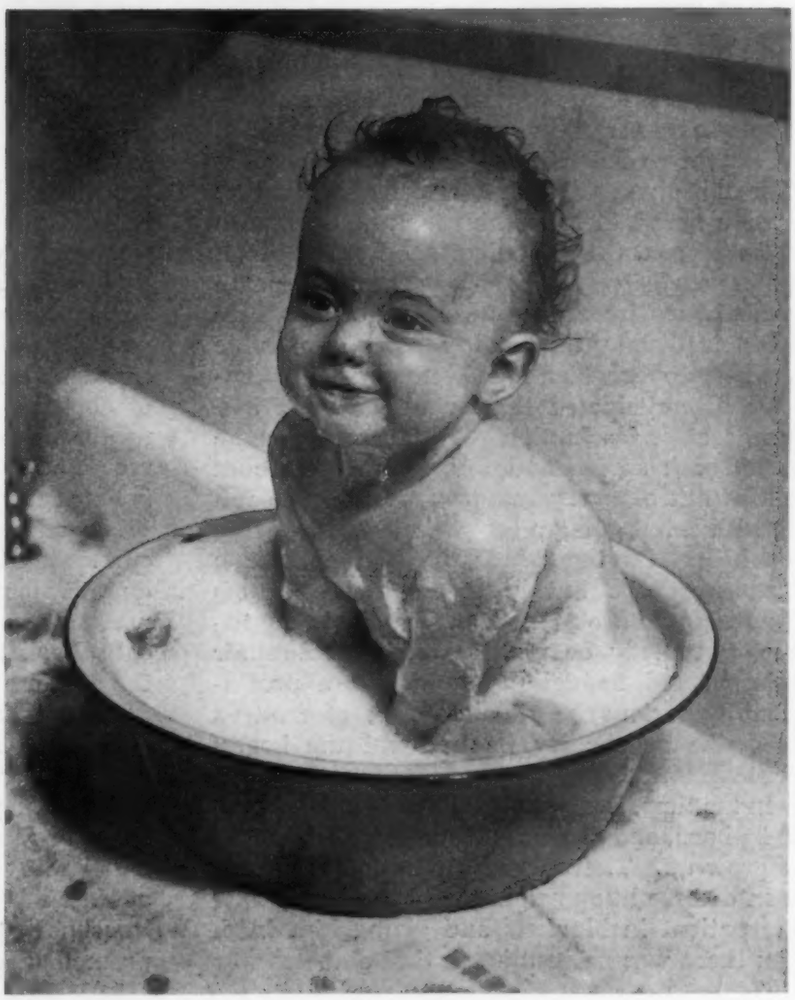
Opposite page, top left:
HARRY BROUHARD

Opposite page, top right:
JOHN E. O'BRIEN

Opposite page, bottom:
C. W. EDDY

Above: **GEORGE A. SMITH**

Right: **FRED W. KINGHORN**



$2 PRIZES, *Continued*

M. W. Jennison, *Massachusetts Institute of Technology, Cambridge, Mass.*
W. T. Morrison, *79 St. James Terrace, Yonkers, N. Y.*
Mrs. August Oberlander, *2515 Fort Ave., Waco, Tex.*
Victor Pokorny, *2104 Leishman Ave., Arnold, Pa.*
J. G. Pratt, *1105 Ridge Rd., Silver Springs, Md.*
Mrs. Emily Sammons, *Grayhaven, Milwaukee, Ore.*
Shune Snow, *74 Kenwood Park, Springfield, Mass.*
Thomas Stanton, *526 Madison St., Gary, Ind.*
Irving R. Susskind, *437 Atlantic Ave., East Rockaway, Long Island, N. Y.*
Henry P. Tries, *6026 Chopin, Detroit*
Elise Voysey, *Cliff Drive, Bayville, Long Island, N. Y.*
The Rev. F. M. Wetherill, *3012 W. Coulter St., Philadelphia.*
Edward W. Wingaris, *Llewellyn Rd., Minerville, Pa.*

(Continued on page 545)

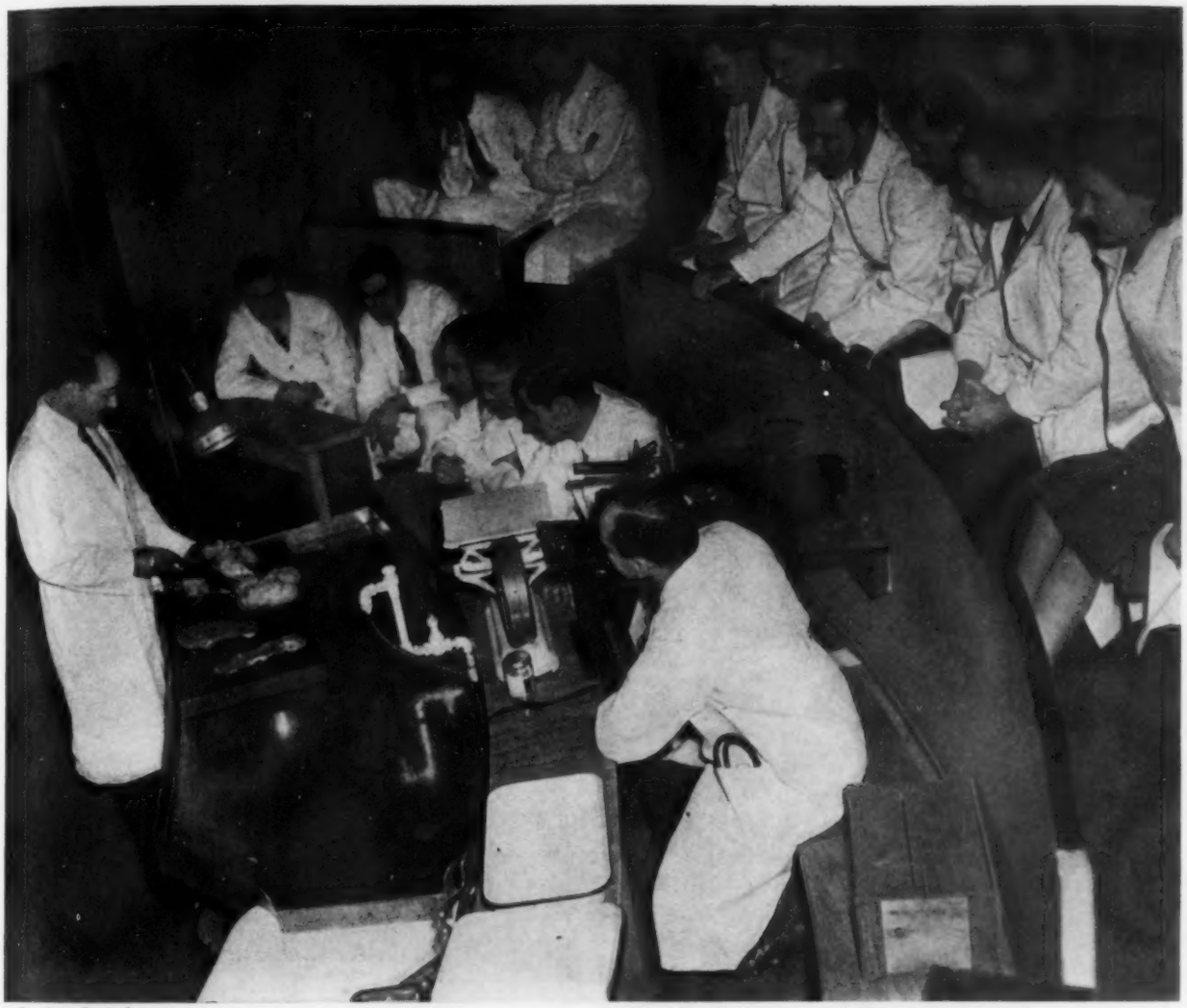
The Modern Doctor

By REGINALD FITZ

NOT so long ago, the doctor was in many ways a vastly more picturesque figure than he is today: So much was expected of him. He brought babies into the world; he ushered old people out of it; he was heart specialist, lung specialist, kidney specialist, stomach specialist or skin specialist; he was physician and surgeon and every other kind of a doctor all in one—even a veterinarian if he had to be. No wonder that he seemed wise and always appeared serious and that he wore a beard to make him look mature, with a frock coat for its dignity. For he dealt almost exclusively with sick people, and Death was always lurking around the corner. He recognized infant mortality as a deplorable condition over which he had no particular control; he anticipated that typhoid, which had the greatest fascination for him, would come along each spring and fall, killing off about fifteen out of every hundred people who fell ill with it but going a long way toward paying his bills. On the whole, he had not much faith in drugs but great confidence in *vis mediatrix naturae* [the capability of living tissue to remedy or remove disease or repair injury], red flannel poultices and a professionally serious bedside manner; of modern medicine or surgery he had but the barest perception.

In his time, it was somewhat risky for people to be born, and riskier still for them to attempt to grow up. There was little to do for a common disease like pneumonia beyond wrapping the patient in blankets and giving him fresh air; there was no insulin, so that diabetes was a rapidly fatal disease even for any person with sufficient courage to follow medical advice; pernicious anemia and cancer were regarded as hopelessly incurable disorders, of some medical interest, perhaps, but entirely untreatable. Such surgery as was done, was, for the most part, carried out on the kitchen table, and blood transfusions and other surgical procedures which save many lives today, and which must be performed with modern hospital equipment, were not available. Beyond question, the doctor of the old school was a splendid figure; he was a general practitioner in the broadest way; he fought bravely and cheerfully against long odds; accounts of what he did showed that he had unbelievable courage and tenacity of purpose. But that type of doctor is gone, and in his place has grown up the modern doctor, as different in point of view and appearance from his predecessor as is black from white.

Nowadays all doctors know that it is a difficult matter to become one. Quality rather than quantity is needed. Hence, each year there are many more youngsters wishing to enter medical schools than there are places for them, and the student who succeeds in finding a place in a good school achieves it by being selected carefully from among many competitors. From the very start, he is hand-picked. He must display personal character and an aptitude for medicine in a way which makes him outstanding among his fellows. He must have at least a better than average scholastic record in school and college, with special training in premedical courses as well. No medical school



Stephen Deutch

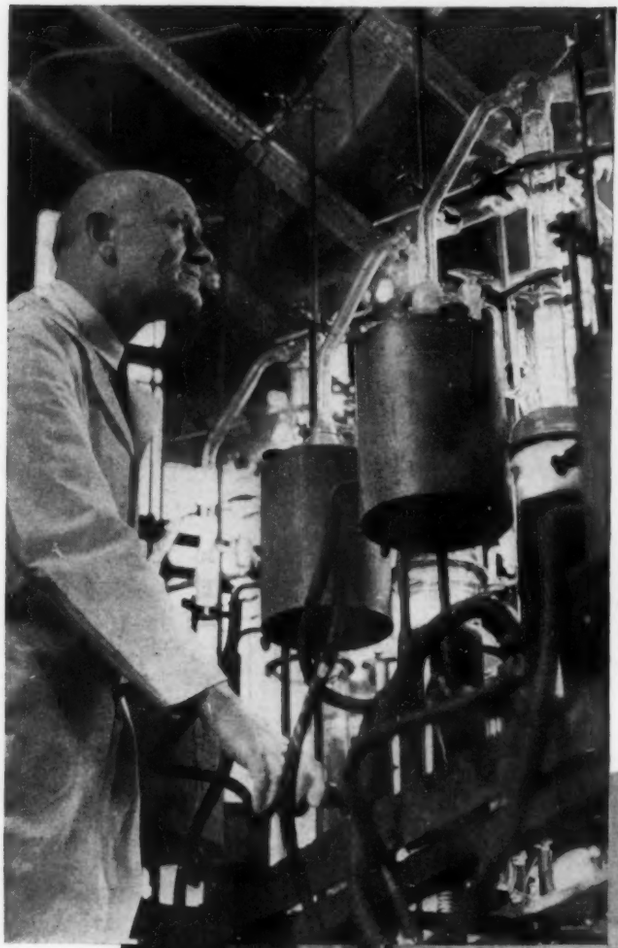
Each medical school vies with others to improve medical education and to turn out year by year an increasingly more competent senior class.

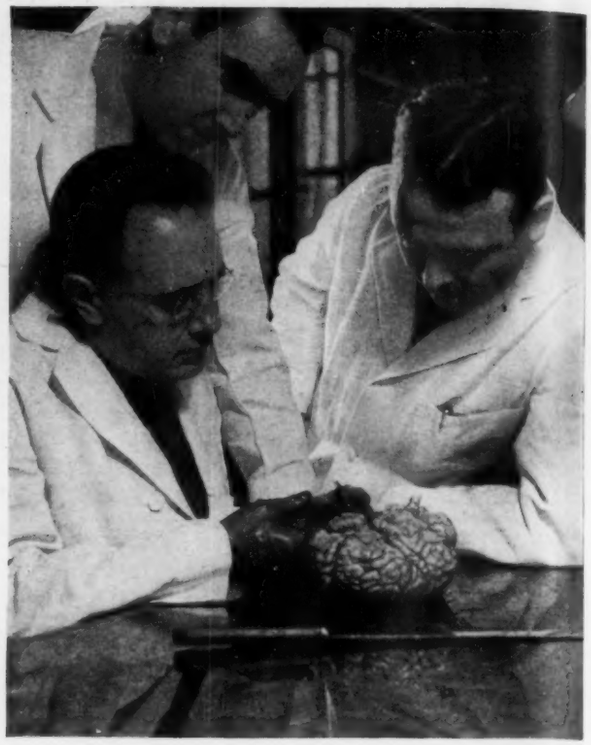
is willing to bring up poor doctors. Each school vies with the others to improve medical education and to turn out year by year an increasingly more competent senior class.

The embryo physician leaves high school when he is about 18 years old, college at 22 and medical school at 26. Now he can properly be introduced to people as "Doctor," but nobody assumes that he really knows anything of his professional work. Then he lives for a year or two in a hospital, acquiring concentrated experience in dealing with disease; but even at 28 and after this experience, he is a mere fledgling. It takes a man at least another five years to learn enough of any single phase of medicine to be regarded as having had adequate training in it to be taken seriously; and, if the recent hospital graduate is bold enough to hang out his shingle and try his hand at general practice, it takes an equally long time for him to obtain even a foothold in any community. Thus, a doctor is well on the shady side of 30 before his medical career begins.

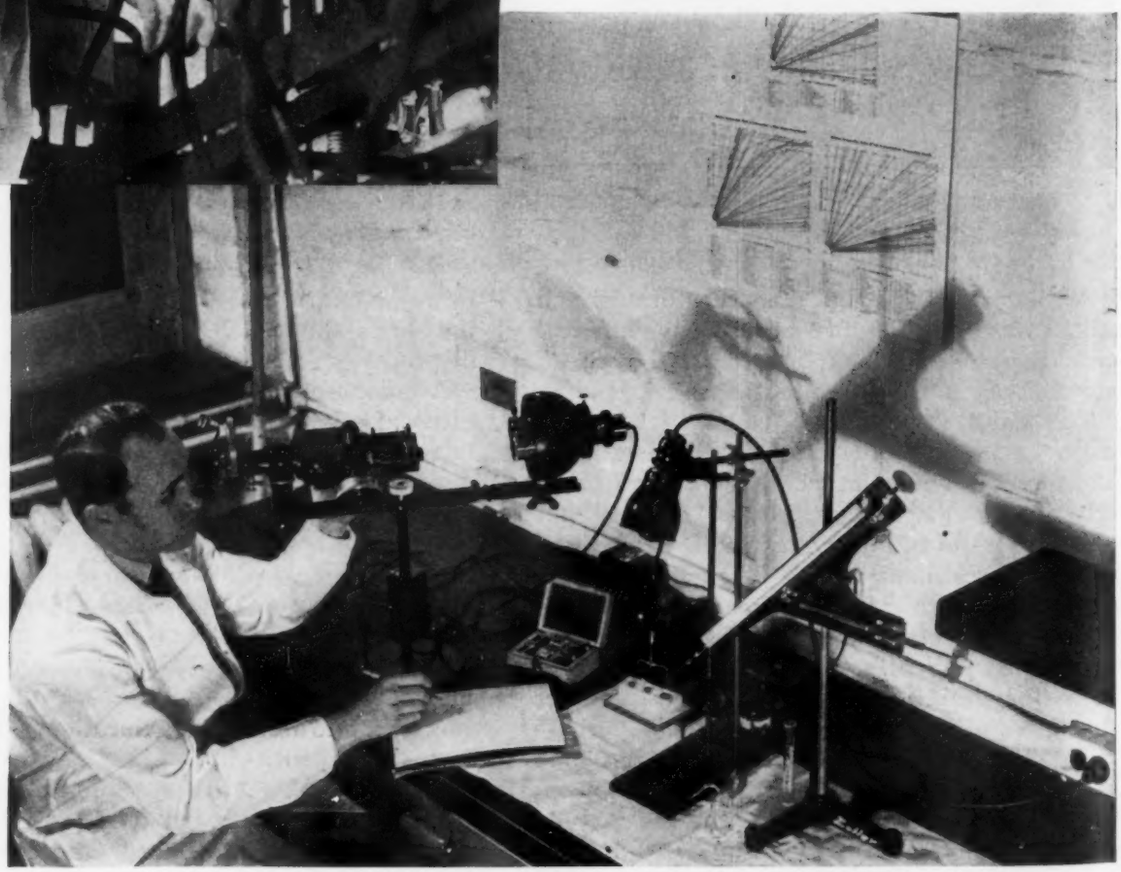
All doctors know that most hospitals and medical schools retire from their active staffs those physicians or surgeons who reach the age of 65 or thereabouts. This is a sensible regulation, for doctors age quickly. The majority die before they reach such venerability, and many of those surviving this deadline are likely to have lost the fire and vigor of youthfulness which is so essential to the knack of being progressive. Thus, in this day and age, the active period of a doctor's life is not likely to be of long duration. The practice of medicine at best is not a lucrative occupation. The average physician or surgeon can look forward only to about thirty years of life at full speed, and it is during these years of high activity that he must build up his reputation and some capital, if he can,

Medical research is continually making discoveries that add to man's knowledge of nature.

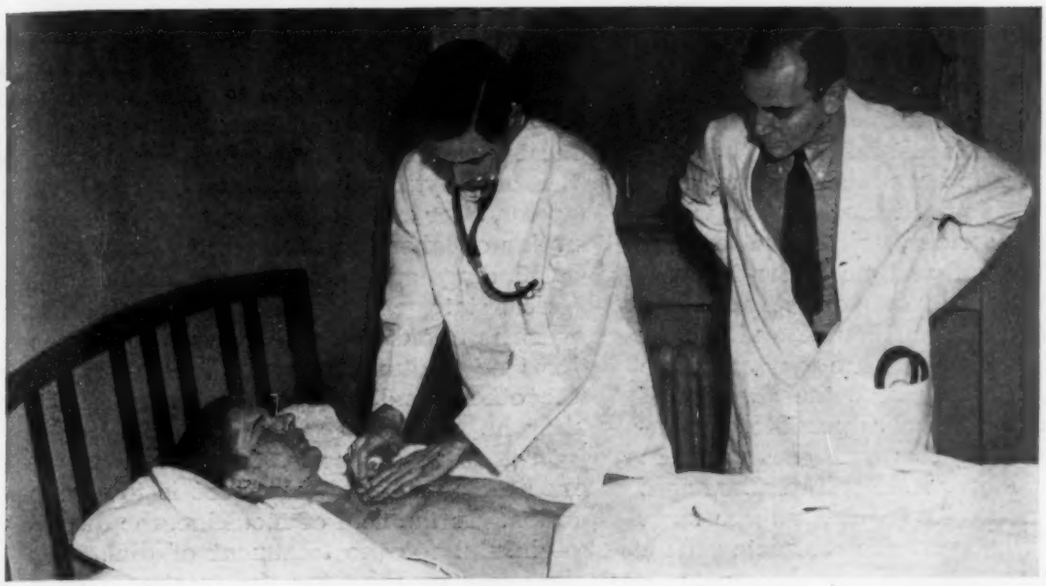




Postmortem examinations often reveal valuable data and account for much medical progress.



Painstaking studies and voluminous annotating likewise serve the doctor by revealing useful facts.



After the medical student has completed his prescribed course in a school, he applies for admission to the staff of a hospital, where he receives an intensive practice of medicine.

with which to meet the vicissitudes of advancing age.

The strange thing is that most doctors are happy. They like their work. They like their sons to follow in their footsteps. Their innings may be short, but while they last they are good.

The scheme of education by which the modern doctor is developed has become, by necessity, bewilderingly complicated. Most persons agree that the serious contributions to medical knowledge with which every doctor must be familiar have increased at a more rapid rate during the last forty years than ever before and are being augmented each year; and, of course, the modern medical student must learn not only new concepts of disease as they are evolved but also the foundations of knowledge on which new concepts have been constructed.

A few years ago, the medical student had drilled into his head as much of what was called "theory" as time allowed, and this was his education; today, the danger of too theoretical an education is generally admitted. Hospitals and medical schools are so closely bound together that early in his course the student is given opportunity to see applied in actual practice all that he learns of the theory of medicine, and his training from the beginning is made as practical as possible. This does not mean that much of what his fathers were taught has been thrown overboard, but rather that the modern medical student must learn the cream of this and a great deal more besides.

The trend of modern medical education has been guided not only by advancing knowledge but also, to some extent, by what an advancing population thinks it should have in the way of medical service. Fundamentally, of course, what the medical profession must supply depends on the requirements of those who may employ it. Hence, the modern student, besides learning the technical side of diagnosis and treatment, must be taught something of the wider aspects of medicine, in order to know in the future how best to meet what the ordinary person may reasonably demand in the way of medical service.

The layman of today has heard a good deal of medicine and of medical terminology. He speaks freely and even in mixed company of things which would have made his mother blush: of birth control, of glands, of Wassermann reactions. He knows of the Wagner National Health Bill. He likes medical stories, so his mind grows increasingly aware of medical activities. He reads realistic descriptions in advertisements about the cure for headaches or indigestion or other ills, and in the newspapers he sees more or less detailed accounts of medical achievements. He may attend lectures on medical topics given by doctors, so that he feels he has become something of an anatomist, a physiologist and a hygienist. He is convinced that he has a right, if he falls ill, to be taken care of in an expert manner. He does not wish to fall ill if he can

help it; consequently, he is interested in preventive medicine. But since he knows that death does not necessarily come from accident or old age, he realizes that some day, almost inevitably, he must fall ill. When this happens he wishes to have medical knowledge advanced so that his particular disease, which now may seem serious, will have enough known about it by that time to be inconsequential. In brief, the layman of today appears to expect, as a matter of course and at low cost to himself, the best of care for immediate illness, research to minimize the severity of future illness, and, insofar as possible, prevention of disease, so that as time goes on there shall be less and less of it. Doubtless, he hopes some day for a Utopia in which there shall be no sickness whatever. To complete such a program is by no means easy: It is a large order. Trying to fill it as best he can is one of the most perplexing things the modern doctor is up against.

Nobody appears to know how medicine, with such responsibilities on its shoulders, can best be supported. Even the government would find it vastly expensive to pay for it. President Robert Maynard Hutchins of the University of Chicago recently stated that the most important educational event of the past year has been the continued decline in the rate of return on invested capital, which, if it keeps up, inevitably means that medical schools and hospitals which are not supported by taxes will be increasingly hard pressed to maintain the standard of work expected of them. I know of no Community Chest which complains of being overfilled. People often do not stop to realize why they should lean over backwards to contribute largely and cheerfully to the hospitals or medical schools of their communities, or why they should pay their doctors' bills ungrudgingly. The basic purpose of medicine is to work for the public good. The public, if it wishes better medicine, cannot obtain such a commodity without paying for it.

Recognition of disease has become a complicated procedure. Precision and accuracy in diagnosis are rapidly displacing any suggestion of haphazardness. The modern doctor is trained to go at things as carefully and logically as possible. When first he sees a patient, he must determine what is actually wrong. This entails a detailed account from the patient of what he feels or thinks he feels. Then the patient must be put through a physical examination which must be meticulous. The value of certain laboratory procedures as aids to diagnosis has become firmly established. Some of the tests commonly used are simple, but others are complicated. All laboratory procedures of any kind, depending as they do on physical, chemical or bacteriologic technics, must be performed expertly to yield results that are anything but misleading. Finally, the doctor, after examining the patient by a combination of laboratory analyses, objective physical findings and proper interpretation of historical statement, arrives at a conclusion as to what he thinks is the difficulty. For this, perhaps no treatment may be indicated; or, on the other hand, treatment of a special type may be required.

Just as in diagnosis, the modern trend in medical or surgical treatment is toward precision. In the field of medicine, the discovery of insulin for the treatment of diabetes, the discovery of liver for the treatment of pernicious anemia and the discovery of sulfanilamide for the treatment of various infections have each seemed important enough to win Nobel prizes. To use these weapons to best advantage requires experience, care and accuracy. Too much insulin is dangerous; liver unwisely administered is ineffectual; the wrong dose of sulfanilamide is anything but helpful. These three particular substances are mentioned because at the moment they are conspicuous in the public eye and because their effects may be so dramatic. The modern physician or surgeon must employ, familiarly, a variety of drugs and procedures which potentially are harmful. Thus, in order to safeguard people who are ill and give them the best of treatment, the modern doctor must not only be well grounded in the use of diagnostic and therapeutic procedures but must also have at his disposal facilities for carrying through properly what must be done or for measuring the effects of the various methods of therapy which are utilized. So it is that well equipped and competently staffed hospitals and laboratories are now essential to the best treatment of disease. The proper management of serious illness no longer is a simple one-man show: It requires well organized team play and is a cooperative enterprise. It cannot be done cheaply.

Preventive measures against disease are bound to be discovered slowly. It is true that infant mortality is much lower now than it was a few years ago, so that to be born and to grow up is no longer the perilous adventure it once was and that infectious diseases of which the cause is known have been more or less done away with. Typhoid fever, smallpox and diphtheria, *(Continued on page 549)*

Correcting Speech Defects

By JAMES SONNETT GREENE

Photos, Acme

Difficulties in speaking are extremely embarrassing even to a small child, so it is important that correction be started as soon as the defect is heard.

OF ALL the ills that afflict our school children, few take greater toll in childhood happiness or cause more real tragedy later in life than speech defects. It is only since recent reports disclosed that over 1 million school children had some sort of speech or voice defect that we have realized the magnitude of the problem and the speech teacher is receiving the recognition she deserves in our educational system.

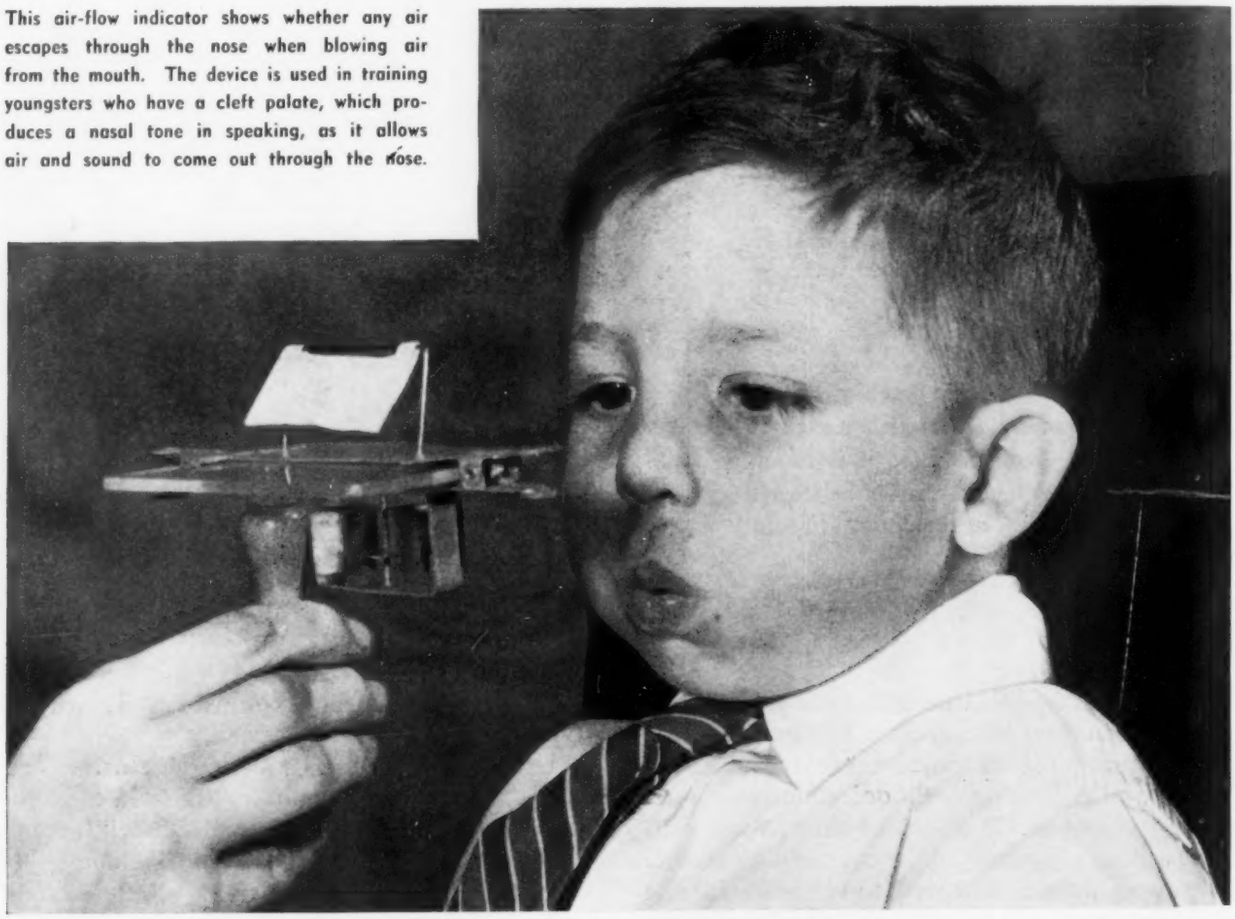
Many are the different defects and disorders with which she has to deal, but for the most part they fall into two general groups: dysphemia, or stuttering, and dyslalia. The latter, according to derivation, means "bad talking," and the term is used to cover both functional and organic defects of articulation. Among the forms of dyslalia with which the speech teacher or clinician is most frequently confronted are oral inaccuracies of various types and cleft palate speech.

Oral inaccuracies is a rather inclusive term and covers in general the entire field of sound omission, addition and substitution. Lisping, agitophasia or cluttering, infantile speech or "baby talk," and the various other phonetic defects fall under this heading. So, too, does idioglossia, an individual language which some children develop and which usually is totally unintelligible to the listener.

The cause of oral inaccuracies is often some malformation of the teeth, mouth or other organs of speech. Frequently, however, the speech defect is due to poor hearing—especially in the higher frequencies—or to poor auditory discrimination, in which case the child lacks the ability to differentiate between correct and incorrect sound patterns. Aside

from these actual structural malformations and hearing disabilities, the causes of oral inaccuracies are mainly environmental, and the speech defect is the result of poor training or poor language models in the home.

If the speech defect is organic in origin, the physical anomaly itself must first be corrected, because normal speech depends on a normal anatomic structure. However, if the distorted speech patterns have become ingrained, supplementary speech and voice training is essential. In most cases of oral inaccuracies, speech therapy is a matter of routine drilling in the various sounds with which the child has difficulty. The teacher must begin with a great deal of drilling on the simple sounds, showing the child the correct position of the tongue, teeth and lips, and gradually combine these simple sounds into more complex units and finally into words.



This air-flow indicator shows whether any air escapes through the nose when blowing air from the mouth. The device is used in training youngsters who have a cleft palate, which produces a nasal tone in speaking, as it allows air and sound to come out through the nose.

In cases of cleft palate speech, however, we have a somewhat different problem. A cleft palate is a condition present at birth. The cleft, or opening, in the palate may be one of several types, depending on its size and its location in the roof of the mouth. A child may be born with a cleft of only the hard palate [bony forepart of mouth] or with a cleft of just the soft palate [soft tissue in the rear of the mouth], or he may be born with a complete cleft, in which case the entire roof of the mouth is open. Each type of cleft may or may not be accompanied by a harelip. Whatever the type, it usually affects the speech function because the roof of the mouth is essential to the correct production of almost all sounds. It not only has a great influence on the resonance and tone of the voice but also checks and controls the flow of air into the nasal passages. Therefore, the speech of the person afflicted with a cleft of the palate is almost always impaired.

The individual usually has an unpleasant nasal intonation and at the same time is unable to make the sounds which call either for contact of the tongue with the palate or for the regulation of the passage of air through the nose. In some cases the speech is so badly mutilated that it is almost indistinguishable, and the child frequently becomes so morbidly

self conscious about his defect that he develops antisocial attitudes.

Wherever possible, the cleft should be closed by surgical methods, and it is important that these operative procedures be undertaken early. The operation should be performed before the child has an opportunity to develop bad speech habits, because once such habits develop, they are difficult to overcome.

The operation itself does not remedy defective articulation. In fact, there is frequently little, if any, change in the child's speech following repair of the palate. It usually retains its nasal resonance because the soft palate regulates the exit of air through the nose; and if it is absent, or as often happens, if the operation shortens it or renders it immobile, the nasal passage remains open, and nasality results. For this reason, after an operation on the cleft palate, the patient usually accompanies the sibilant sounds with a peculiar nasal snort.

Another result of the inelasticity of the soft palate is difficulty in producing the sounds *k* and *g*, which depend on contact between the soft palate and the back of the tongue. If the hard palate is affected, the sounds *t, d, n, r* and *l* are frequently unintelligible; and in cases of harelip, the patient has difficulty in making *p, b, m, f, v* and *w*, because he is often unable to bring his lips together.

In almost every case the speech of the child with a cleft palate can be improved after operation, but this special type of training requires concentration on the part of both teacher and child and must be carried on over a rather long period. Often the child is extremely self conscious and shy, and the teacher must overcome his sensitivity before actual speech training begins.

We have found that it is comparatively easy to teach these children to form sounds; that is, they soon grasp the idea of position. But they find it extremely difficult to direct the current of air emanating from the larynx. In many cases, because of the loss of tissue due to the operation and frequently because of the almost complete absence of the uvula [small fleshy mass hanging above the back of the tongue], there is a wide space behind the nose. The vocalized air flows into this postnasal cavity and the nasal chambers, and nasal tones result. In other words, instead of directing the current of air through the mouth, the child allows it to escape mainly through the nose.

For this reason, before beginning any actual phonetic drill exercises, we concentrate on teaching these children to direct the current of air correctly. When a cleft palate patient begins treatment he is given a special kit containing materials which can be readily procured at any 10 cent store: for example, a soap bubble set, a variety of rubber balloons and a number of small, light celluloid toys which can be blown across the table. A teacher who understands children can readily utilize this simple material to great advantage by devising games that will teach the child breath direction easily and naturally.

We have also developed another special device, an air-flow indicator, for the same purpose. The indicator is held so that the wheel is on a level with the child's mouth, and the plate is pressed against the upper lip. In this position, the suspended flap is so placed that any air emitted through the nose immediately causes it to flutter. The purpose of this device is to teach the child to direct the air current in such a way that he rotates the wheel without causing the flap to move. He can accomplish this only by shutting off his nasal passages completely and blowing through his mouth. Once he has learned to shut off his nasal passages in this way and to direct the current of air correctly, phonetic drill exercises are introduced to teach him the positions of the various parts of the speech mechanism in the production of the different sounds.

There are various other forms of dyslalia, but in the main the treatment of all these conditions is a matter of speech reeducation. That is, we treat the speech defect directly; and the skilled speech teacher, through proper procedures, can usually bring about desired results—unless, of course, there is some organic abnormality which cannot be corrected.

In the case of stuttering, however, we have an altogether different and much more serious problem. In fact, it is not primarily a speech problem at all, for the speech disorder itself is merely an outward or physical manifestation of an underlying nervous maladjustment and personality involvement.

The child who stutters belongs to what I designate the Stutter Type. Prof. Ivan Pavlov pointed out that an individual's type of personality depends on his nervous excitation and emotional stability. He classified all people into three basic groups: the moderate, the weak and the strong nervous excitation groups. We are interested here in the last group, and particularly in those high-strung, temperamental persons whom Pavlov classified as "strong but unbalanced" in terms of excitation and interruption of psychomotor function.

(Continued on page 554)

GRANNY

THE motherly lady missionary was regaling her audience with stories of experiences among the Hottentots. In apologetic tones, like a fond mother speaking of a naughty child, she told of the black witch doctor and the man with an infected leg. It was a bloody tale having to do with a white rooster, split open alive and bound to the patient's leg. Deep in my vest I chuckled. Three weeks before and in the good woman's native state I had watched the same procedure. An old woman had laid open a surprised and protesting cock and clamped the squawking, gory mess to a throbbing leg.

In our more remote communities, in the backwashes of civilization, old women still practice the healing art, as they have for generations. The roots of this practice go far back into our folklore. During the years there has accumulated a vast store of this homespun medical knowledge. In some regions the wise women are consulted even before a physician is called. At times the Granny women do a great deal of harm, but their aims are laudable; they attempt to relieve suffering.

All of us are familiar with the less bizarre forms of granny medicine. Grand-dad always carried a potato or a buckeye in his pocket to ward off the twinges of rheumatism. Many of you wore a black cotton thread tied about your neck to prevent croup. And a few wore a bag of pungent asafetida as a general preventive measure against infection. And Aunt Hattie always bound a piece of brown paper soaked in vinegar about her head for her regular attacks of "Sick Headache."

In the deep mountains along the upper reaches of the Big Sandy, where it flows between Kentucky and West Virginia, I first encountered Granny medicine in full flower. When first married we lived in a coal camp. One morning just after breakfast a neighbor woman rushed into the kitchen and demanded a dish cloth. My bride fetched her a little knitted square done up in a glassine poke. The woman threw it down, grabbed the rag from the dish pan and fled. Later in the day she explained the baby had suffered a "spasm." First she had poured salt into the infant's clenched fist. This sovereign remedy had failed. But when the child's face was wiped with a neighbor's greasy dishrag, the seizure promptly ceased. She forgot entirely that almost any self respecting convulsion would end in the time required to obtain the rag.

In the mountains any process that involves the formation of pus is called a "Beeling." This is a most convenient term which covers

MEDICINE

By L. W. BRYCE

anything from a pimple to a brain abscess. Granny women seldom resort to surgery in treating this sort of thing. Their activities are usually confined to poultices for "bringing it to a head."

One day a rangy mother brought a fretful youngster to the clinic. Its eyes were bright with fever, and its thin hand pulled at one ear. Examination revealed an acute mastoiditis and a black, gummy substance behind the offending ear. When questioned, the mother said the black gum was cow dung Granny put there to "draw out the fever," fresh cow dung being highly regarded in these circles as a counter-irritant. In this connection it might be mentioned that sheep dung tea is an esteemed remedy for "breaking out" a case of measles.

Then there was the boy who limped in complaining of a stone bruise. The nurse unrolled yards of dirty home-torn bandage. From under the last layer hopped a pompous and outraged toad that had been bound there to relieve the pain.

Back in the hills you will learn that a sty on the eye will quickly disappear if rubbed with a gold ring. A man borrowed my class ring to treat one of his children. Several days later he advised me I had been cheated, for the sty was not yet well. Alas, time and a green ring about my finger proved him right.

The most logical sounding Granny remedy I ever heard of is slippery elm tea. A reliable old lady told me in confidence of its wonderful properties. If elm bark is peeled upward when collected, tea made from it will act as an emetic. But if peeled down, the tea will check vomiting.

If you live in the city and are subject to nose bleeds, you will in all probability consult a physician about the matter. But back in the mountains it is much more simple. A red string worn about the little finger will usually check any such tendency. If this should fail, a necklace of red corn kernels will always do the trick. It is also well to know that a key dropped down the back is useful in stopping a severe nose bleed that is in full swing. This failing, a silver coin held under the upper lip is more potent. If the bleeding is unusually severe and does not yield to any of these remedies, more heroic measures must be taken. In a predicament of this kind, allow some of the blood to drop onto the blade of an ax or knife and plunge it into the ground before the gore dries.

In the field of preventive medicine, the Granny woman is a little weak. But she does dip into the sphere. One will tell you that a piece of red flannel into which are stuck five pins will prevent measles, whooping cough,

scarlet fever, chickenpox and mumps. The piece of cloth so prepared is simply laid under the child's bed.

For manual workers Granny prescribes a wristlet of leather, if possible the part of a discarded horse harness. This prevents sprains and strengthens the wrist. And it is a well known fact among Grannies that a nail wound will never cause lockjaw, if the nail is well greased with bacon fat and carried in the pocket until the wound is healed.

It is in obstetrics and pediatrics that the Granny woman comes into her own. Here she moves with practiced ease and does the most harm. Malnutrition, lack of vitamins and the attending complications are common among the hill folk. A child suffering from any of this group of ailments is said to have the "Go-Backs" or "The Decay." The usual treatment for these conditions is fairly easy. Any mother with common intelligence can apply it. You find an elder sapling and split it where it forks. Pass the sick child through the cleft and bind up the wound in the tree trunk. When the bark heals over, the child will be well. Strange to say, this remedy sometimes fails! Then an old woman who knows the words is called in consultation. With a piece of string she goes over the victim as if measuring it for a suit of clothes, all the while muttering the proper incantation. I have been told by mothers who should know, that if this fails there is no hope for the child.

Another remedy which makes use of a tree has to do with the treatment of bronchial asthma. Here the patient is backed up against a tree and a lock of hair is pegged into a gash in the bark. The hair is then cut off. When the bark covers the imprisoned hair, the sufferer need fear no more attacks. I wonder if these methods are not hangovers from the days when our ancestors were Druids.

If you have or expect to have a baby, there are a few useful facts you should know. Somehow all the government bulletins published on child care seem to have overlooked them. But the young mountain mother knows them all. She has heard them since infancy. In the first place, never put the babe's clothes on over her head. Always poke her into the dress feet first. Otherwise she will surely die within the year. Likewise, never allow the offspring to look into a mirror or cut her hair before the twelfth month. Either of these acts will cause the youngster to waste away. Many an innocent mother has ruined her baby for life by cutting its fingernails before the sixth month. This invariably causes the poor child to grow up a thief. However, biting the nails does not count. If your baby is fretful from red and swollen gums when cutting teeth, the trouble was probably caused by some thoughtless adult putting his or her hat on the child.

Back in the hollows and up on the hillsides the Granny woman delivers most of the babies. Thanks to nature, she seldom does any real harm. The main complication she encounters is slow and difficult labor. The Appalachian Granny has several tricks up her dirty sleeve for handling these situations. If things are going too slow to suit her, she takes off her shoes, has the mother put them on and walk about the room. The old women discovered long ago that this hastened the termination of labor.

If the labor is long and the patient is worn out, the Granny "quills" her. The midwife simply sticks a goose quill into a box of snuff and blows the powder into the mother's nose. The resulting fit of sneezing will dislodge the most obstinate fetus. No mountain midwife worthy of the name ever goes on a case without her goose quill, and she always carries snuff for personal use. For the benefit of city specialists I imagine a soda straw would work as well as a goose quill.

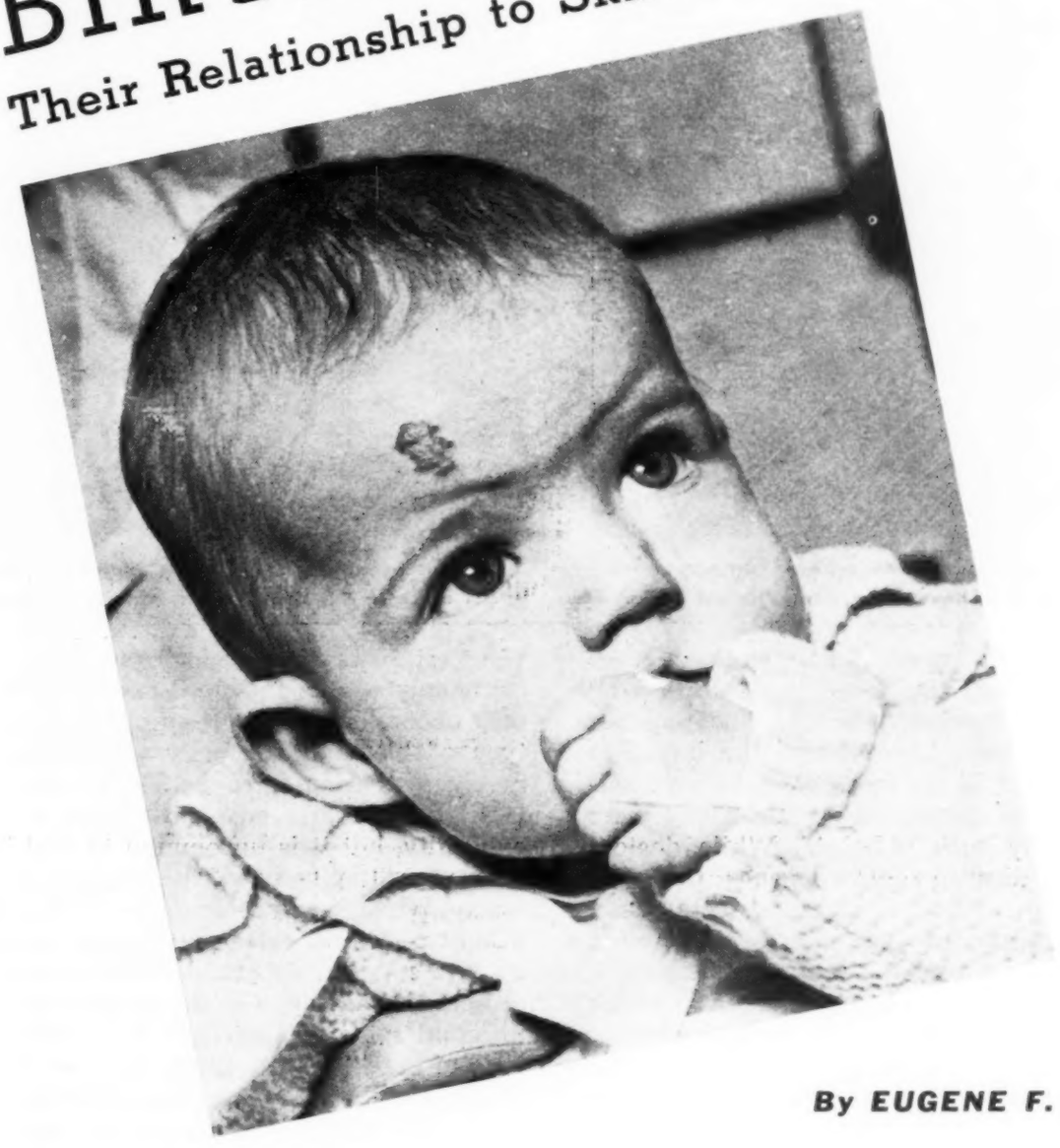
After the baby is born, the mother wants to know the number of whorls or loops in the cord. This is important because the number indicates rather accurately the progeny that the mother may expect in the future. The midwife never fails to bury the placenta. She maintains that if it is burned, the mother will have backache until pregnant again.

No history of Granny medicine is complete without mention of treatment of sterility in the female. It antedates modern glandular therapy and was well known in the last century. The midwife hands the naked newborn babe to the barren woman saying, "Within a year you'll be holding one of your own." It is surprising how frequently the remedy works!

In conclusion I must say something about warts. For some reason the witching away of warts is usually practiced by an old man. Different men use different methods. I once paid an old gaffer $2 to let me in on the secret. I will pass it along to you for what it is worth. Have the victim bring you a small pebble in his right hand. Roll the stone about in your hand for several minutes, keeping your eyes closed and the lips parted. Now touch each wart with the stone, and give it back to the patient. Instruct him to give the pebble to the first person he meets, and in two weeks all the warts will disappear.

BIRTHMARKS

Their Relationship to Skin Cancer



By EUGENE F. TRAUB

ALL OF US have some type of birthmark or "mole" on our skins. How many have you? If you are an average person, you may have between twenty and thirty such marks, or nevi as physicians call them. A birthmark or mole need not necessarily be present at birth. It may appear at any time in life but is especially apt to develop during adolescence or the climacteric. Many different varieties of birthmark often appear on the same individual. Children do not necessarily or even usually inherit the same type of mark found on their parents.

It is surprising that with the great frequency of birthmarks or nevi a more accurate knowledge of their origin, development and ultimate fate has not been accumulated during the ages. Needless to say, many superstitious beliefs and legends have been handed down, and it has taken years of careful medical investigation to dispel such notions. For example, blood vessel birthmarks of a certain type are referred

The raised vascular birthmarks, angiomas, are a common type, and they are more frequently seen in girl babies.

The spider nevus may appear at any time following birth, but it can be destroyed completely without any scarring.

to as "strawberry marks," and, as the mother is often sure that she ate strawberries during the time she carried her child, she inquires whether this may have caused the infant to be so marked. If the mark resembles an animal, often the parents recall that they were frightened by such a beast. While doctors have dispelled such foolish legends, the great accumulation of names given to birthmarks, together with the uncertainty as to their cause, has further confused the issue. Hence, there is much false information around as to which marks may be complicated by the development of cancer. For both accuracy and simplicity, therefore, it is convenient to divide the birthmarks into three main classes:

Group I consists of the vascular or blood vessel birthmarks. These are composed of blood vessels, or more rarely of lymph vessels. The vascular marks are found most commonly on the skin and mucous membranes; but they may affect many of the deeper structures of the body as well, so that we may have a coexistence of vascular marks of the skin and of the deep organs. In turn, the vascular birthmarks may be divided into three types, consisting of the flat, the raised and the deep or cavernous variety. A classical example of the first of these, the flat type, is the well known "port wine" stain or "port wine" mark seen most commonly on the face and usually occupying only one side or one portion of the face. This type of blemish is usually present at birth, rarely appearing later in life. Occasionally this type of mark may be seen on the upper extremity, but it is uncommon to find it elsewhere on the body. These marks are not always port wine in color; some of them are of a light pink hue, or the mark may be broken up into small groups or patches of capillaries sometimes varying in depth of color even in the different spots. Faint, light red forms of this type of mark are frequently seen on the nape of the neck and less commonly on the center of the forehead at the base of the nose in the area between the eyebrows. In the last two locations named, this type of birthmark should never be treated. In fact, all examples of the flat vascular birthmarks are difficult to remove without leaving a defect that may be worse than the original mark. Furthermore, most persons today are accustomed to seeing this type of birthmark and think very little of it; whereas, a peculiarly shaped scar as a result of treatment may be mistaken for the sequelae of a much less desirable disease.

Another one of the common vascular marks that is generally flat, although its central por-

The pigmented, hairy birthmark varies greatly in size and may extend over wide areas of the body.

The pigmented, hairless variety should be removed, if it occurs on the foot.

tion may be slightly raised, is the type known as the "spider nevus." It has received this name because the little blood vessel at its center looks like the body of a spider, while the smaller vessels radiating outward form the legs. This type of spider birthmark, or nevus araneous, may be present at birth or may appear at any time later in life, frequently following trivial injuries to the skin, particularly of the face. This type of mark can easily be treated. A direct electric needle puncture into the center or body of the "spider" destroys it completely and leaves no scar in its wake.

The raised vascular nevi are usually spoken of as angiomas. They are probably the most common of the blood vessel birthmarks. Many additional names have been given them, such as "strawberry mark" or "raspberry mark." They are raised above the skin surface and vary in color from a brilliant red to a livid, purplish red. They are generally present at birth or appear shortly afterward. Angiomas, strangely enough, are found more commonly in girl babies. In fact, most all the vascular birthmarks are more frequently encountered in female children. It may be for this reason, too, that parents more regularly seek treatment for this type of mark.

In the deep type, the collection of blood vessels appears to be underneath the skin surface, and when the mass is picked up, the bundle of blood vessels feels almost like a bunch of worms under the skin. This type is spoken of as a cavernous angioma. The overlying skin has a blue, purple or slate colored appearance which indicates the presence of deep blood vessels beneath. Frequently, the cavernous angiomas are accompanied by a raised surface angioma with its bright red color.

The question of the treatment of the raised and deep angiomas is of great importance, and due weight must be given to a number of considerations. In the first place, the infant is never too young for treatment to be instituted. It may be definitely stated that if the mark is to be treated, the sooner such treatment is started, the better, as young blood vessels respond readily to small doses. But if the patient is permitted to grow older and the blood vessels composing the mark become more fixed, larger and more frequent dosage becomes necessary; under such conditions the final result is usually not as good.

Under what circumstances should the child be left untreated? In a number of patients, these marks have a tendency to disappear spontaneously, either in part or entirely, and

for this reason it has been argued that these marks should not be treated. Occasionally, these marks have disappeared without ulceration and scarring, in fact without leaving a trace, and such a result, of course, is ideal. But unfortunately this does not occur frequently. Most of the angiomas that have a tendency to disappear of their own accord do so by breaking down and ulcerating, and rather unpleasant scarring is the result. When this occurs, a far better cosmetic result would have been obtained had the patient been given suitable treatment as early as possible. Unfortunately, one cannot foretell whether by letting nature take its course, the result will be good or bad. But an expert physician can almost invariably achieve a definitely desirable result. Therefore, in my opinion, it is more conservative to watch these marks closely and if any indication of a rapid increase in size is seen or if signs of impending ulceration are noted, treatment should be begun immediately. On the other hand, if the mark does not increase in size or show an unfavorable change in appearance, it may be observed for a limited time—but not longer than one year from birth—to see whether nature will cause its disappearance. As stated previously, if one waits too long, if nothing favorable occurs, the subsequent treatment becomes more difficult.

The best treatment for the raised or deep angiomas is radium, carbon dioxide snow, the injection of sclerosing [hardening] solutions or some type of cauterization. It should be emphasized that there is no danger to the patient's health or life in starting at the earliest possible moment to treat these blood vessel tumors. Nor do the pure blood vessel tumors ever result in the ordinary type of cancer. It has been recorded that certain of the vascular birthmarks have resulted in a wild overgrowth and spread of newly formed blood vessels, but this occurrence has been so rare that it may be called an exception to the rule.

The second great class, group II, of birthmarks comprises the pigmented hairy and warty nevi. This group undoubtedly is the most common and most frequently encountered of all types. They may be found on the individual at birth, but probably the majority are delayed in their appearance and hence are not seen until the age of puberty or some later period in the patient's life. Contrary to the experience occasionally encountered with the blood vessel birthmarks, the pigmented hairy or warty nevi almost never show the tendency to disappear during the course of events. In fact, spontaneous disappearance in this group is a distinct exception to the rule. The so-called mole belongs in this group. This large family of birthmarks may be subdivided into four main divisions:

The first division consists of the pure, smooth pigmented mark which may be either flat or raised. These pigmented birthmarks may vary in color from a light brown to a dark brown or inky black in appearance. The so-called slate blue or black mole and the blue nevus are included in this group. The so-called "beauty mark" or "beauty spot," once prized by many girls if fortunately located on the eminence of the cheek, is another example of this type. While probably the majority of the marks belonging in this division present a relatively innocent appearance, nevertheless, it is this type from which is derived the malignant type of cancer known as the melanoma. No variety of cancer is more dangerous than that which may spring from some of these smooth, pigmented, hairless and nonwarty marks. Most individuals who have become apprehensive about some peculiar type of mark or growth on their skin have rarely been much concerned about any of the smooth, hairless pigmented spots, which may be so dangerous. It has been stressed that the darker or blacker the mark is, the more dangerous is it apt to be. This is not necessarily true; but a mark that has been light brown in color and suddenly turns black may indicate that a dangerous change has taken place. Increase in size, bleeding, ulceration or any other noticeable change is usually an indication that the blemish has been awakened from a dormant condition and should receive expert attention. Some of these symptoms, particularly bleeding and ulceration, are comparatively late signs so that no time should be lost. Complete widespread removal using preferably an electric cutting current is the treatment that should be instituted. The tissue so removed should immediately be submitted to an expert skin pathologist for study.

What should be done about the smooth pigmented, hairless or nonwarty birthmarks? Naturally, most of these blemishes do not develop into cancers or melanomas. If the nevus is in a location not subjected to injury, it is usually wisest to leave it alone. If it is on the extremities, especially on the foot, it is best to remove it as a prophylactic measure. When in doubt as to the innocence of the mark, it should be removed by a physician for microscopic study. Any removal or other treatment for this type, whether done for cosmetic reasons or for prophylac- *(Continued on page 564)*

SOOTHING MEDICINE
To view my turtle in his bowl
Is very restful, on the whole.
He snoozes peacefully all day
In such a lovely human way,
It gets me so relaxed and all—
I call him phenobarbitol!
SOCIAL MYOPIA
We're spending millions of dollars
For research all the time
To discover the cause of cancer;
But we never spend a dime
To try and discover the reason why
A woman is never on time.
OBITUARY
He thought it was foolish to see a physician
For therapeutic advice
When suffering from any condition,
When his friends were all so nice.
They told him what to take and do—
And it didn't cost him a single sou!
Hawley

Poems by W. E. Farbstein.

CEREBRAL HEMORRHAGE

ranks fifth among those nine killers which cause 72 per cent of all deaths. Apoplexy, or stroke, describes it better to many persons, but an explanation for all is given here by

CARL W. APFELBACH

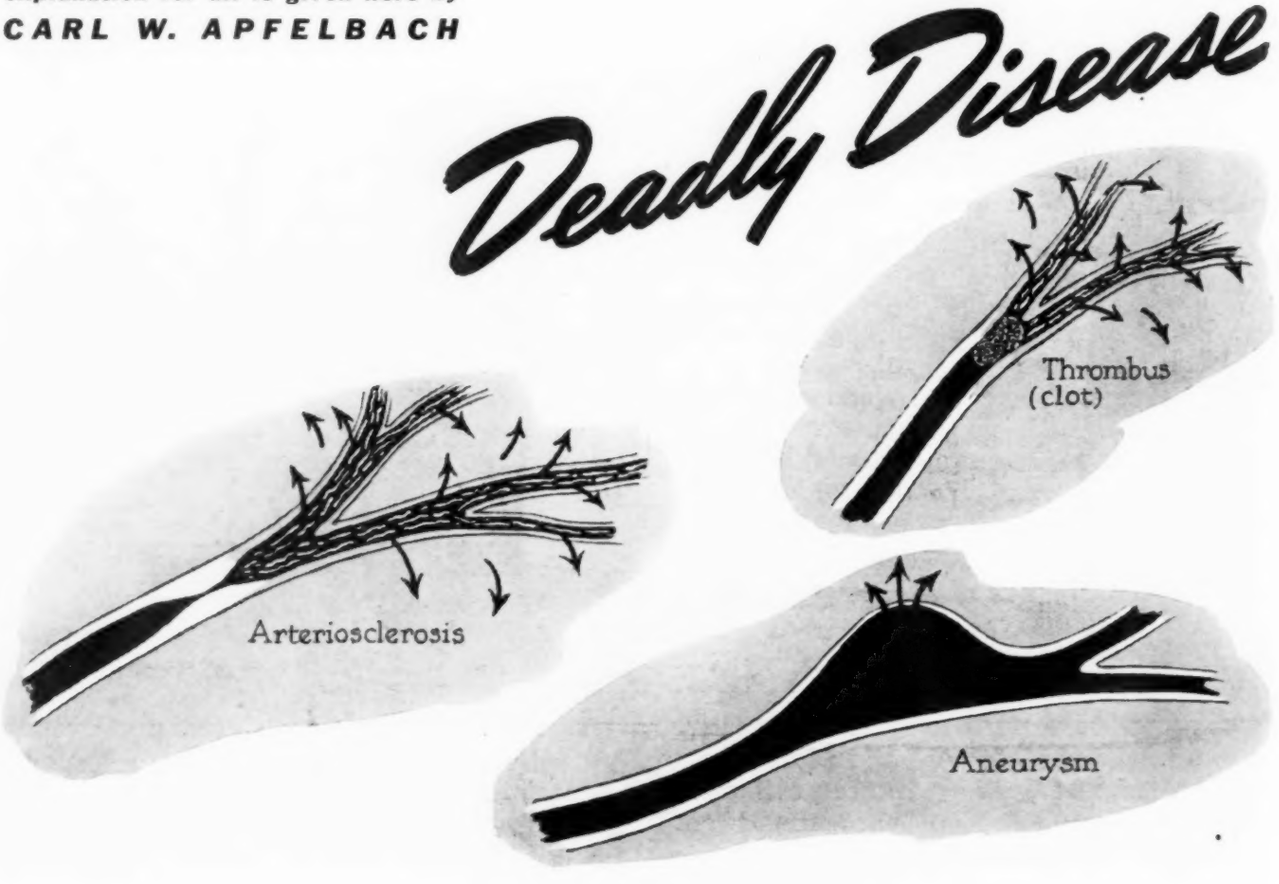
Deadly Disease

CEREBRAL HEMORRHAGE is the name of a disease that is characterized by sudden and unexpected onset of unconsciousness, paralysis of the extremities, usually of one side of the body, and a high rate of mortality. It is caused by spontaneous rupture of an artery within the brain, and its seriousness is proportionate to the amount of blood that escapes from the torn artery and the extent to which the blood destroys vital centers of the brain.

Apoplexy is a term frequently used by physicians and newspaper writers to mean cerebral hemorrhage. The term is appropriate, because it is derived from a Greek phrase meaning "to cripple by a stroke." The rapid loss of consciousness and the quick collapse and frequent falls to the floor give the impression that the patient was struck down by some unseen hand.

There are a number of diseases that may produce unconsciousness in a patient. In some diseases, unconsciousness may occur as quickly as it does in cerebral hemorrhage; whereas in others the onset is much slower. Furthermore, paralysis may occur in a manner like that of true cerebral hemorrhage. Usually if a physician has an adequate history of the mode of development and symptoms of a disease, he can make an accurate diagnosis. But too often physicians are asked to make a diagnosis after unconsciousness has developed and without an adequate history. Under these circumstances, the term apoplexy is frequently used and is a less definite term, consequently, than cerebral hemorrhage.

True cerebral hemorrhage is observed most commonly in adults after the age of 40 and more frequently in men than in women. The attack usually occurs without significant evidence of any predisposing cause. While this characteristic is alarming to the subject of the stroke, physicians know that elevated blood pressure is one of the most common predisposing causes of cerebral hemorrhage. Consequently when this factor is present, it is known



by the physician who has previously taken care of the patient.

Even though elevated blood pressure plays an important role in the cause of cerebral hemorrhage, few individuals who have high blood pressure succumb to an apoplectic stroke. It is only an occasional complication of high blood pressure.

It is this occasional occurrence during the course of high blood pressure that has directed medical attention to additional predisposing causes in order to explain adequately the occurrence of cerebral hemorrhage. Greatest attention has been paid to diseases of the arteries in the brain.

Among the several diseases of the arteries that have been associated with cerebral hemorrhage, arteriosclerosis [hardening of the arteries] is the one that is most frequently present. This change in the arteries is characterized by the development of localized thickenings in the arterial wall. The pressure of this fibrous tissue weakens the muscular layer, the strongest part of the arterial wall. Thus, in advanced stages of arteriosclerosis, the wall may become weakened at the site of a thickened lesion so that it is unable to retain the blood under increased pressure within the artery, and rupture of the wall occurs, allowing the blood to escape into the surrounding brain tissue.

Another explanation that has considerable merit is based on the presence of congenital weaknesses [present at birth] in the arterial wall. It has been demonstrated that uniform development of the strong muscular coat does not occur equally throughout the vessels of the brain during fetal life [before birth] and childhood. Particularly at the branching of arteries, regions of unusual sparsity of muscle have been observed. Adherents to this explanation of cerebral hemorrhage have observed small, thin-walled pouches in the brain arteries. With blood pressure increasing in adult life, as it often does, a time is reached when these pouches, known as aneurysms, rupture, as do the weakened regions in the hardened arteries.

Number 5—

At right, the brain as seen from underneath, showing the blood vessels. In cerebral hemorrhage, one of these ruptures and may destroy vital structures in the brain. At left, three common causes of bursting of a blood vessel.

Other theories concerning structural changes have been described. In the past, syphilitic infection of the cerebral arteries was believed to be an important factor. It more frequently leads to a blocking of the arteries by a clot, which induces a disease that is slower in onset but does simulate cerebral hemorrhage in many ways. An irregular development of a network of arteries at the base of the brain, known as the Circle of Willis, has been observed in some instances and probably contributes to the development of a hemorrhage if the other causes, high blood pressure and hardening of the arteries, are also present.

In addition to the structural weaknesses of the cerebral arteries, considerable thought has been given to conditions that produce sudden rise in blood pressure above the average level of persons suffering from high blood pressure. The history in some instances of cerebral hemorrhage has revealed that an apoplectic attack has followed unusual physical effort or emotional excitement. In addition to actual instances where this relationship has been observed, there are other confirmations that suggest the importance of sudden rise in blood pressure. Cerebral hemorrhage occurs more frequently during the waking hours than during sleep. Patients suffering from high blood pressure in a hospital, where they are kept at rest and where attempts are made to reduce the elevated blood pressure, less frequently have apoplectic attacks than do those who are actively engaged in their ordinary pursuits.

The history of onset and the appearance of a patient who is suffering from cerebral hemorrhage is typical, and when all the facts are available, a diagnosis can readily be made. The patient may suddenly and unexpectedly lose consciousness, or this may be preceded by a short period of headache and dizziness. It may be known that the patient had an elevated blood pressure. Deep unconsciousness quickly occurs. The breathing becomes heavy. The cheeks move noticeably with respiration. The muscles of the face and extremities are limp. Frequently the patient falls to the floor. When examined, it is found that the blood pressure is elevated, often higher than the previous known levels. After a few hours have elapsed, and the initial insult to the brain has subsided, it will be noticed that the muscles of one side may be moved by the patient; whereas the other side remains perfectly quiet.

The loss of strength and movement in one side of the body is characteristic of cerebral hemorrhage. Usually the hemorrhage is present in only one part of the brain. The start of muscular movements is governed by the motor region of the brain which is in the side of the middle third of each hemisphere. Nerves originating from such a region join to form narrow tracts that pass down through the brain to the pons and medulla where they cross to the opposite side of the spinal cord. From there, they are distributed through the peripheral nerves to the muscles of the extremities. Consequently, a destruction of brain tissue in the right side of the brain near the motor centers will produce paralysis of the left side of the body.

The course of the disease depends on the amount of blood that escapes from the ruptured artery. In the average fatal case, the actual amount of hemorrhage is no larger than the capacity of a teacup. This is a small amount of blood in contrast to the large amounts that escape when arteries in the legs or arms are cut. The seriousness of the cerebral hemorrhage is due to the fact that the brain is enclosed by a firm, bony covering, and there is no quick method of releasing the increased pressure produced by the hemorrhage in the cranial cavity. As a result, the escaping blood more quickly destroys the tissue into which it bleeds, raises the pressure within the entire cranial cavity and by this indirect method compresses the centers that control the vital functions of breathing and heart action.

It is believed that most true cerebral hemorrhages are fatal. When a patient recovers from an apoplectic stroke, it is usually due to one of the other conditions that simulate cerebral hemorrhage. This is a debatable point, because the healing of a small hemorrhage, when observed years later, does not have characteristics that are distinctly different from destructive lesions that occur from blockage of the blood vessels by clotted blood.

If recovery does occur, the patient gradually regains some degree of consciousness. The muscles of one side of the body are paralyzed. If the hemorrhage occurred in the left side of the brain, difficulty in speaking and understanding words may also be present. Only after weeks of treatment is there moderate return of function to the paralyzed side.

The general plan of treatment is based on muscular rest, proper hygiene of the body functions, attempts to lower the blood pressure moderately and the prevention of pneumonia. Operative procedures on the brain to relieve the hemorrhage are as yet in an experimental state.

(Continued on page 539)

The new face was to be achieved—according to the magazine ad—by vegetables, but not by eating them.

CHEMICAL CAPSULES

More truth than fable.

By **W. W. BAUER**

MARTHA MORON had been a pretty girl. She was now a Good-looking woman, or would have been if she had been satisfied to be her Age. But Martha wouldn't be. Martha at Forty wanted to look like twenty, and so she enlisted the aid of Beauty specialists. Of course every woman Indulges in a certain amount of Beauty culture, such as Permanents and other kinds of waves, Manicures, rouge, Powder and So Forth. But Martha wasn't satisfied with those Either. Martha went in for something more Original. She fell for the advertising about chemical Beauty.

At first she could hardly believe it. Chemical Beauty, it seemed, was the newest Scientific discovery. A great Physician said so. She knew he was great because his Magazine said so, and he Admitted it himself. He wrote Articles about it, and published them in his Very own Magazine. And it was full of the most Marvelous advertising. There wasn't anything that a Woman couldn't have in the way of Beauty, if she only had the Right

chemicals—and The Price! It didn't depend on Food either, she learned, because a hungry Woman could never be a beautiful Woman, no matter how much Food she ate. If she didn't have the Right chemicals, her Blood would be Hungry. Martha looked at herself in the Mirror and decided that she must have hungry Blood. Anybody else looking at her just then would Have Decided that she was perfectly well nourished and not Hard to look at.

One of the Ads in the Magazine especially attracted her attention on account of the Way her own eyes looked to her. She thought they were a trifle Puffy, and this ad said that she could have a New set of Lids Ready to Wear. She had her clothes made to her Measure, but the Idea of a new Face ready to Wear appealed to Her. The new face was Achieved by means of vegetables but not by Eating them. No, indeed! The way it was Done was to Feed the Eyelids. Positively. And the Eyelids had to be Fed with vegetables. It was done with a Vegetable mask and was to be worn all Day; it became part of the Skin, especially if combined with Vegetable arsenic, which, believe it or Not, was not poison like the Drug arsenic but a real and permanent Benefit to the Skin. It sounds Nerts, but that's what the Advertising Said.

Martha was Earnest about her Quest for Beauty. After reading all about how the Vegetable mask gave éclat to the Face, she sent the Money for the Stuff and used it Faithfully according to Directions. But her cheeks and Chin failed to return to the Beauty of Childhood days, as promised. She suspected she must have the wrong combination, and so she went Back to the Magazine again and looked for some More information. She found it, together with a Picture of a very sad looking Girl who, according to the Copy, was Easy enough to Look at, but still the Boys didn't go for her. The explanation was right There, too. What she needed was a Change in her body Chemistry, because she had a Lack which caused Something that All her Daily showers failed to Remove. Yes, sir! The Remedy was Vitamin Q, a combination of all the known Vitamins and all Alkaline body minerals. Price, in capsules, $1.89, from Fortified Food Factors, Inc. Cash with Order.

In the meantime, of course, while she was Taking these capsules, she had to Eat. And the Magazine took care of that, too. It told her What to Eat and what not to Eat and how to plan her Meals so that she would have the Right combinations, so that her Digestion would not be injured. For instance, Fish and

She saw her friend the chemist sitting near; he grinned but didn't say anything, as he noticed what she was eating. She remarked, "I'm going to eat today. I'm off all that chemistry hooey!" "Sure," he said, "why monkey with pills, anyway?"

Milk at the same Meal were out, because they were not Compatible. No, Indeed. Martha shuddered at all the creamed Codfish she had Eaten in her Time, to say nothing of Other fish dishes and fish sauces made with Milk. Probably, she sighed, that was why she Got the way she Did. And proteins and Starches at the Same meal were nothing Short of a Crime. Because, the Articles said, starches were Digested in the Mouth and Proteins in the Stomach, and if you Mixed them there was Likely to be a Blow-up. So Martha never ate sandwiches with Meat any more, because that was mixing the Food wrong. And she gave up Meat and Potatoes together. Also, she gave up any Pleasure she used to have with Her Meals. She just went through the Motions. She Browsed instead of Eating. And as she Ate her bread, wishing for Meat on it, she didn't know that there was Protein and Starch in it. She didn't know that Proteins and Starches are so Mixed up in Nature that it would be a Man's size Job to separate them. Nature in the Raw is seldom Simple. Of course, what she didn't Know didn't give her any Headaches.

In the meantime, all her Reading about Minerals and what would happen if she Cheated herself on them almost made her Dizzy. She read in an article about Goats' milk that if she didn't have any Fluorine, she would get into trouble. She didn't have the least idea what Fluorine was, so she asked a Chemist friend of hers, and he said it was an Element; and when that didn't seem to Mean anything to her, he said it was a chemical they etched Glass with. That gave Martha a Pain when she thought of all the Fluorine she was supposed to have been getting in her Diet. She also asked the chemist about Silicon, which she described as a very important Item in the Body, in fact, the chemical of Youth. The chemist grinned all over his Homely mug and told her that silica was what sand was Made of. She figured he was trying to Spoof her, and she did not ask him any More questions, which probably made him Feel Bad.

Between Chemistry, rebuilding her Face and getting all the Elements which the Body requires for Health, Youth, Beauty, Magnetism, Joy, Charm and a lot more Blah, Martha couldn't enjoy her Meals or her Sleep. She couldn't have any Fun for Worrying about her Chemicals. Her Diet was always in the Way of her Food. And her Mirror didn't give her any more Cheerful reports about her Face than usual. In fact, she seemed to be getting Worse. She detected new lines where the Wrinkle treatment was supposed to remove the Old ones by Smearing the vegetables on the outside in a Paste, instead of loading them in where the Equipment was to handle them. And the little Packages of capsules gave her a Severe pain every Time she looked at Them, and a whole Flock of Aches around the Pocketbook when she had to shell Out for a new Supply.

Then the latest issue of the Magazine came one day, and she didn't have time to Look at it until she had removed her Clothes for bed. When she opened it, the First article she saw was one about Ladies Unveiled by a New Process. The picture that Went with it was Unveiled, no fooling, but the process appeared to be Nothing more than leaving off the Clothes. Martha looked at herself in the Mirror. As far as she could see, Unveiling her now wouldn't be any more Startling than it would have Been four months before, when she Began trying to make a Laboratory out of herself for the Benefit of the Health Capsule racket. Martha had never been Noted for being very Smart; but this was the last Straw, because she was Hungry besides.

She slipped into her night gown and started for the Kitchen. The Magazine went into the Waste Bucket, the Capsules went after it, and Martha raided the Ice box, thanking her Stars that her landlady was a Good provider and that her Board was Paid ahead. When Martha had wrapped herself around the remains of a good Meat Loaf together with some Potatoes she fried and large Gobs of bread and Butter and a glass or two of Milk, she felt a Lot better. By this Time her Proteins and Carbohydrates were all Balled up, and she should have had the Jim-Jams, if the Magazine wasn't all Wet. But Martha went to Bed and had a long sweet Sleep. She woke up the next Morning feeling better than she Had in weeks and all Ready to Poke anybody in the Jaw if they Said a word to her about Chemical Beauty.

Later in the Day, as she slipped into a Chair at a cheap Eatery near the Office where they went in for Plenty, but not Class, she saw her friend the Chemist sitting across from her. He grinned but kept his Mouth shut.

"That's all Right," Martha said, "I'm going to Eat today. I'm off the chemistry Hooey."

"Sure," he said, "the Chemicals are all in the Fresh Food, anyhow. Why monkey with Pills? Waiter, gimme another Slab o' this pie."

"Me, too," said Martha, getting that Glow of Satisfaction for the first Time in Months.

MORAL: A little Knowledge is Duck Soup for the Racketeer.

Flying

HIGHER and higher reach the gains in passenger travel by air, as each month the airlines hang up new records for this branch of their service. Larger and more magnificent planes are being built to accommodate this increased demand; new and longer routes are being flown to points never before reached by airplane. The world is definitely air-minded.

But with this there arises a new problem. With more persons flying, the amount of air sickness rises. Air sickness is a real annoyance and a source of great discomfort to any one who is its victim; it accounts for illness in about one in every 200 air passengers.

But what is air sickness? Like sea sickness, train and car sickness, it is due to an extreme sensitivity to motion of the body and may produce nausea, vertigo or vomiting. Some persons are naturally susceptible to these forms of illness and always experience them whether traveling by sea, rail or road; others feel disturbed only under the most serious and provocative conditions. But there is no reason why even the small number of persons of the former type may not still enjoy the benefits of air transportation, since they may prevent air sickness entirely by taking certain medication before going aboard or before the symptoms have progressed. A quick acting sedative that does not have a prolonged effect is the most highly desirable. It should of course be prescribed by a physician.

But for the remainder of the air travelers who have not yet experienced it or who feel it occasionally, there are several preventive measures which can be employed. The factors which cause air sickness are rough air, extreme nervous tension, intemperate habits of eating or drinking, faulty cabin ventilation, heat and excessive altitude without accessory oxygen. All these are avoidable, save the first—rough air, and the effects of this are minimized when the pilot flies in the higher altitudes above the weather. Slower speed will also reduce the severity of the bumps. Pilots of all the major airlines have instructions to reduce the speed of their ships when in rough weather, unless in their own best judgment the conditions warrant higher cruising speed.

In any case of "nerves" which cannot be relieved by reassurance or the diversion of attention to maps or games, a mild sedative, as prescribed by a physician, is the best antidote. Persons who are victims of excessive nervousness are likely to be those who are up for the first time, who sit tensely in their seats and find considerable difficulty in relaxing. Also in this category are the "hangovers" who have celebrated too freely before departure, and still others are those who have received

Meals that are served aloft are planned for the average eater; the chef takes every precaution to exclude foods that might cause individual distress.

saddening news and are flying to the bedside or funeral of a relative.

The heat and ventilation of the passenger cabin is easily controlled, and if you tell the steward or stewardess that you are too hot or are suffocating, she can adjust it to your comfort. Insufficient fresh air and excessive heat will sometimes precipitate an attack of air sickness when it could otherwise have been avoided. The stewardesses on one airline are instructed to keep the air vents open to admit at least 30, and preferable 40, cubic feet of fresh air per passenger per minute.

It has been found that the effects of altitude are more noticeable when riding in the mountain train or motor car than when one is riding at the same altitude in an airplane. This may be due to the winding roads or rails and the continual changes in the field of vision. In flying, you need only to keep the attention fixed on some point or object inside the cabin. However, the abrupt movements up and down, as in rough weather, with the resulting "sinking sensations" in the abdomen, are more important in contributing to the feeling of air sickness. At the altitude of 10,000 feet or higher, the lack of oxygen in the rarified air is acute enough to cause air sickness. This hazard of course can be removed immediately by taking auxiliary oxygen from such tanks of it as are always available aloft.

Don't eat rich or heavy foods or anything that might cause gas to form on your stomach either before going up or while in flight. Meals that are served aloft are planned for the average eater. Personal idiosyncrasies in gastric reactions cannot be gaged by the airline's chef, although every precaution is taken to exclude any food from the menu that has a general "disagreeable" tendency. In case of stomach distress, an effervescent alkaline drink is helpful and obtainable from the stewardess.

Furthermore, chewing gum will contribute to the general comfort and "ventilate" the ears, for the changes in atmospheric pressure may cause the eardrum to react unpleasantly. Many persons never experience air sickness but do have difficulty in keeping their ears from causing distress, such as a "clicking" in the eardrums. The explanation for this is simple: As the plane gains altitude, the air pressure becomes lower. This must be equalized inside the ear chambers, and it may be accomplished by swallowing frequently. Anything "mechanical" that will aid this process is beneficial, such as sipping water or chewing gum.

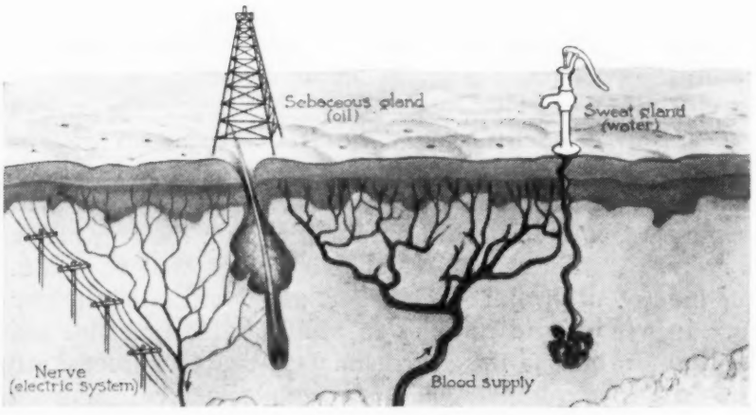
In general, an easy, relaxed mental attitude and implicit confidence in yourself and your airplane crew will take you through the trip without air sickness.

with Ease

By SIBYL WINSER JOHNSTON

Infants travel comfortably by air now. They have personal service and a complete kit put aboard containing food and things to play with.

Wonder Stories of the Human Machine



The skin shows activity of many little systems. The sense of feeling is part of the nervous system, which is represented by a network of fragile threads. As a protective system against drying and cracking, there are the sebaceous glands, which secrete oil; a hair often has its roots in one of these. The circulatory system has its capillaries in the skin, and the excretory system its water pump for temperature control and perspiration.

HOWEVER perfect an automobile may be when it is all assembled and mechanically complete, it is far from a salable product, for even the most enthusiastic mechanic wishes the car to have its final finish. This must be of the finest materials, elastic and tough, resistant to wear and tenaciously adherent to the body surface.

The body finish of the human machine not only must meet all those specifications but also has many more trying conditions to contend with, for besides serving as a covering for the entire body, the human finish is one of the most important and actively operating parts as well. So important is it that life is not long possible if the skin is seriously damaged over a fourth of its area. The skin is highly elastic, resistant to damages, tough and strong, and the beauty it may impart to the human machine makes its importance generally recognized, although few of us realize just how necessary this covering is for our comfort and safety.

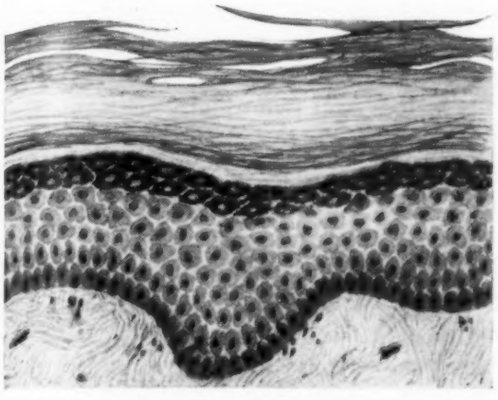
Two important modifications, the hair and nails, are parts of the skin that fill a special purpose in the economy of the human machine. All are most beautifully constructed and are among the most remarkable structures of this wonder machine.

For practical purposes we may describe the skin as composed of an outer part, or protective layer (epidermis), and the inner part or true skin (derma). The outer layer is composed of tough material, overlapping much like tiny fish scales. They cover the entire body and afford a marvelous protective, elastic surface, resistant to bruises, chemicals, light and weather. Even most microbes cannot penetrate the unbroken skin, but it is not entirely proof against parasites. These scales are gradually thrown off and replaced by others constantly forming under them. As there is no nerve supply in this superficial layer, there is no pain attached to it directly, and it affords great protection to the true skin. Sometimes the protective layer is exceedingly thin, and we speak of the skin as being "delicate." It may be thick and almost as tough as sole leather. We see this best where pressure is frequent on the skin. In some parts of the world the native workmen can walk over stony surfaces, stubble fields and the like with bare feet and apparently without the slightest discomfort. An opportunity to understand this ability came when one of the workmen was brought into a hospital with a fractured thigh. While bedridden, the thick skin on the bottoms of his feet peeled off in large pieces. In the thickest areas it was approximately a quarter of an inch thick and not far different from the sole of an ordinary shoe. A similar protection develops in many places on the body. The "trade" calluses are found on the hands of men working along special lines. Such hardened areas may be found at any point of unusual pressure. Sometimes this protective thickening of the skin comes in places where it causes annoyances, and on the toes such thickenings are called "corns."

The inner layer, or true skin, is much more complicated and, while partly protected by the

Part IX: THE BODY FINISH

By GEORGE A. SKINNER



outer layer, is also subjected to severe conditions. In the various layers we find a number of interesting and useful structures that are vitally important.

As the body finish is constantly subjected to all varieties of atmospheric conditions, which may act more or less violently on this exposed surface, one of the first things we note is the method taken to protect it. All through the skin there are tiny glands, not unlike small sponges, that supply a fatty-like substance which spreads out and keeps the skin soft and prevents it from drying and cracking. This material (called sebum, and the glands producing it, sebaceous glands) is exceedingly valuable to the machine and its finish. Like all fats and oils on a surface, it tends to collect dust to some extent. As alkalis dissolve fats, we commonly use soap to remove the accumulated dirt from the finish. But overenthusiasm in this regard often leads to difficulties, especially in delicate skins, like those of babies and young children or in blondes or redheads, and the skin protests vigorously. This protest may take the form of eczema or an unusual scaliness of the skin.

Associated with the sebaceous glands are other glands that throw out water when the machine is active and generating too much heat for safety. Throughout the skin are an amazing number of tiny blood vessels, and activity of the human machine increases the speed of the engine and likewise the amount of blood forced to the skin through these blood vessels. These little vessels dilate, and as they are in close association with the glands that excrete water (sweat glands) it is possible for them to eliminate some of it. This water, or sweat, stands out all over the skin, where contact with the air causes its rapid evaporation, producing coolness. The heat of the human machine is much more closely regulated than that of most other machines, for it can only operate through an extremely narrow temperature range. So long as the coordination between the engine and the covering is maintained by the thermostat or electric (nervous) control, the temperature rarely rises more than a little. But if this thermostatic control becomes inactive, the machine is quickly disabled. This is observed in too prolonged exposure to the sun or high artificial heat, and the results are described as sun or heat stroke. Either may be serious.

Closely associated with the sebaceous and sweat glands are the hairs that cover most parts of the body. Only the weight bearing surfaces of the hands and feet (palms and soles) are free from some form of hairs. They may be long, short, coarse and bristly or so fine and soft as to be practically invisible.

Ordinarily we are practically unconscious of the skin, for in its activities it does not make itself conspicuous but carries out its numerous functions in a quiet and business-like manner. It is so completely supplied with nerves, however, that it is difficult to find a place on the whole surface of the body where a needle point can be pressed without pain. So delicate is the adjustment of these indicators that the lightest brushing of a tiny feather is at once apparent. Sensations communicated to us through the skin may be pleasurable or painful. As we have seen, the sensation of pain is one of the great protective gages of the human machine. Not all parts of the electric system convey the sensations of pain, for there are several systems to convey different types of currents. Heat, cold and pressure are recognized through the same complete and wonderful electric system of the skin.

In addition to the important protective functions of the body finish there is another duty, more psychic than protective but highly valued and generally recognized. This is the decorative aspect of the human skin.

The appearance of the finish is usually an excellent indication of the condition of the entire human machine. If it is not operating properly, one of the first indications is in the skin. Even slight abnormalities may produce an unusual blanching or darkening. A yellow discoloration of the skin is present in jaundice. The flush of exertion and the blue tinge to the

lips and skin quickly indicate respective overexertion and failure of the engine to the trained observer. One of the earliest notices we get of some of the contagious diseases, especially in childhood, is an eruption, and on the form and character of such eruptions we depend largely for determining the cause.

The influence of strong light on the skin is decided. Of late years much has been written about the necessity of sunlight for the growing child, which greatly reduces the dangers of improper growth of the framework (bones). Sunlight is a mighty force, and like most great forces, the proper use may be within quite narrow limits. For a time there was such an abuse of the sun's force because of the craze for sun tan that a great deal of real damage was done to this highly sensitive body finish. Most of the difficulties have been that people were not willing to allow the tan to develop in a normal way but wished to acquire it at once. If it were not for the pain that the increasing sunburn produces, the damage would be much more severe than it usually is. In fair skins such rough treatment often, perhaps usually, results in permanent damage, and in many cases the beauty and softness of the body covering is never regained. We may see such damages in the skin of athletes who are much in the sun and in the "weather-beaten" skins of farmers, sailors, workmen and sportsmen. Unfortunately the same damage is frequently done to young skins, especially girls, who have been careless of sun exposures. Babies and young children can easily be overexposed to this powerful force, and while sunlight is of great benefit if properly used, it certainly has a powerful kick-back if overdone.

It now seems probable that many of the skin cancers seen in later life are due to the repeated irritations from sunlight. These cancers are seen mostly on the backs of hands and on the sides of faces, where the light has the most opportunity to act. Fortunately, they usually respond to proper treatment when brought to the physician's attention in time.

The sensitivity of the skin has been utilized extensively in aiding diagnosis of a number of bodily ailments, particularly in the study of diphtheria, tuberculosis, scarlet fever and for the many possible causes of hay fever. This peculiar property of the skin to respond to certain products (antigens) makes it valuable in many cases in determining the sensitivity of the machine to irritants or diseases and has greatly extended our ability to recognize certain diseases much earlier. Usually, there is a rosy coloration that develops rapidly at the site of an injection when a tiny amount of the foreign substance is injected into (not under) the skin. This is compared with another injection, usually on the other arm, of a similar substance but which does not have the antigen. Sometimes the response is almost immediate, five to ten minutes, sometimes it does not develop for twenty-four hours. These reactions are now all carefully catalogued; most of them are pictured in colors and are generally understood by the medical profession. As they are entirely harmless and practically without pain, there should be no objection to their use, especially when they often prove of such value.

The hornlike tips on the backs of the fingers and toes which we call nails are of the greatest use in daily life, and a finger or toe that loses this protection immediately becomes evident through the pain caused by the lack of its normal shield. Sometimes the nails take abnormal forms, or grow in abnormal directions and so may be the cause of inconvenience and trouble. Usually such abnormalities can be readily corrected by proper treatment.

The finish of our machines is much exposed, and from these exposures it is subject to certain damages. One frequent result is an itching that may make sleep impossible and the possessor miserable. It is usually an indication of a continuous irritation, and the itching is the protest of the machine against it. It may be due to the bites of insects or poisonous hairs or barbs from them. Excessive dryness of the skin may cause scales to pile up and form small hornlike bodies and the skin to crack and bleed. Certain chemicals will produce similar effects. Almost every trade has its "eczema" resulting from exposure to materials employed and usually affecting the hands of the employees. Excessive oil produced by the skin may cause other irritations. Upsets in the chemistry of the body may produce irritating substances and reactions on the skin. Itching of a jaundiced skin may be severe.

Most of the skin disabilities are more successfully treated by skilled specialists than are many of the other disabilities of the machine. It is highly important, however, that treatment be undertaken at the earliest possible moment, for success follows much more frequently where troubles are corrected before they become chronic.

The body finish is vitally important to mankind both from appearance and utility.

NOTE.—This series of articles is being reprinted. The articles will be available separately about three weeks after their appearance in HYGEIA for 15 cents each, postpaid. The entire series will be available in June 1940 in an attractive box file for $1 a set, postpaid.

Next month Dr. Skinner will conclude his series with an article on the upkeep of the human machine.

First Aid for Fair Visitors

By J. P. HOGUET

THE medical department of the New York World's Fair was opened on Oct. 1, 1937, at which time there was only a small suite of four rooms in the administration building, one of which was equipped as a surgery unit. At that time its activities were confined to giving medical care to the 800 employees of the corporation. Approximately 2,000 men were employed in construction work on various buildings at the site. A first aid station was set up in Fire House No. I and consisted of a waiting room, doctor's office, surgery unit and one small ward. Two part-time physicians were put on duty from 8 a. m. to 5 p. m., and a nurse was taken on to assist them.

Inasmuch as the site is within the limits of the city of New York, the question of sanitation was the responsibility of the New York City Department of Health, which later appointed a special deputy commissioner who took complete charge of all matters of sanitation at the Fair.

Patients requiring x-ray pictures were at first sent to x-ray technicians in Queens and Manhattan. The necessity of maintaining an x-ray unit soon became apparent, and a portable apparatus was acquired. A special truck was designed into which this apparatus was fitted. The interior of the truck was equipped as a dark room with a developing tank, with the idea that the patient could be x-rayed at various places near the location of the accident and the films developed immediately within the truck. Later it was

found easier to transport the patients by ambulance to one of the larger stations in which there were means for developing the pictures.

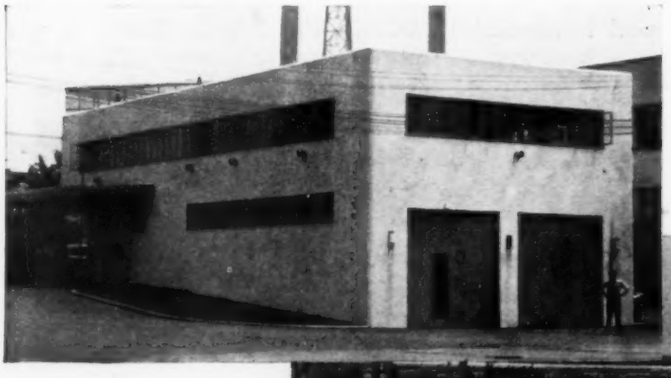
Six first aid stations were strategically placed within the 1,216 acres. In each there was a waiting room, doctor's office, nurses' office, surgery unit and a male and female ward of three or four beds each. In two of the stations there was an additional room for a podiatrist to treat foot disorders. All the stations except Station V, which was in the center of the site in the Medicine and Public Health Building, were on the side roads.

Every employee of the Fair Corporation had a preemployment examination, and while vaccination against smallpox could not be made obligatory, it was strongly urged. This was carried on throughout the duration of the Fair and proved to be of great value. In all the 16,000 vaccinations that were done, it was found that the percentage of severe reactions was extremely small.

The number of workmen engaged on the site increased from about 2,000 in the fall of 1937 to about 20,000 in the two months preceding the opening of the Fair. It was found that the work was not extremely hazardous, as the buildings were all low and not of heavy construction. From Oct. 1, 1937, to April 30, 1939, there were ten fatal cases, all but two of which were accidental.

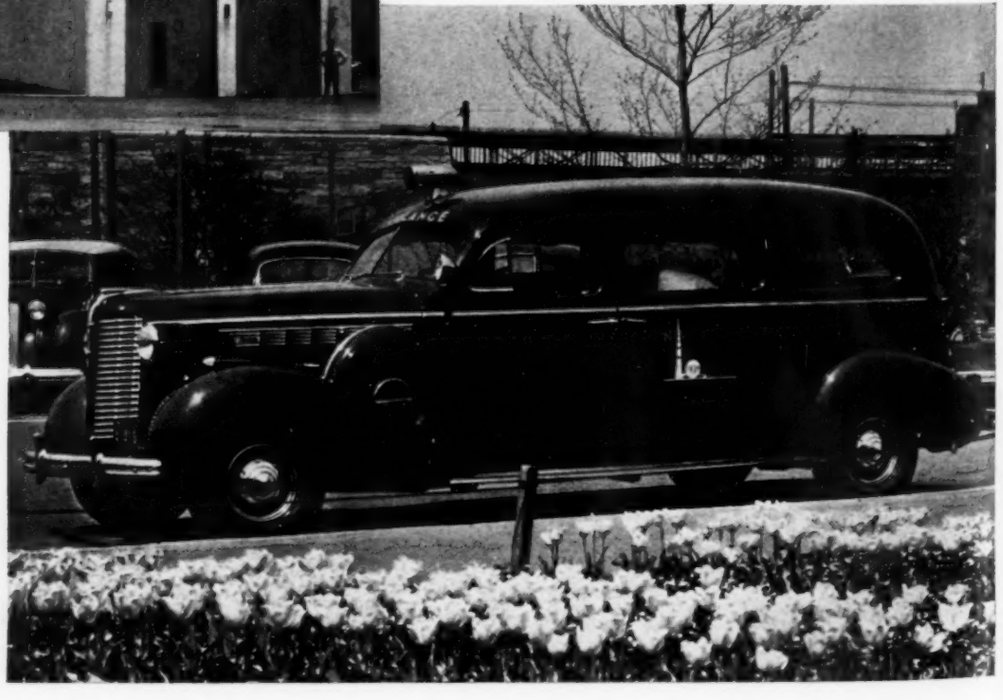
Field Station II was started in September 1938. At this time there were about 250 cases being treated daily in the office in the Administration Building and in the field stations.

The American Red Cross offered to run Station V in conjunction with their first aid exhibit, which was in the Medical and Public Health Building.



After a year and a half of preparations, the medical department of the 1939 World's Fair opened its six first aid stations, of which number one is shown just below.

One of the ambulances used last year, of which all were air-conditioned and contained a special cot and two chairs. Another detail of their equipment was a medical cabinet supplied with everything for first aid treatment while the injured patient was being hastened to one of the stations.



Additional physicians and nurses were taken on in the beginning of April 1939, and the staff was completed shortly before the opening day, April 30. It consisted of a medical director and assistant director, twenty-three part-time physicians, a directress and assistant directress of nurses, thirty-two nurses on 8½ hour duty, two x-ray technicians, eleven ambulance drivers and five record clerks.

April 30th arrived. The attendance on that day at the 1939 New York World's Fair was 250,000, and 350 of them were treated for injuries and ailments in the first twenty-four hours. In a short time the routine for taking care of these people was well established.

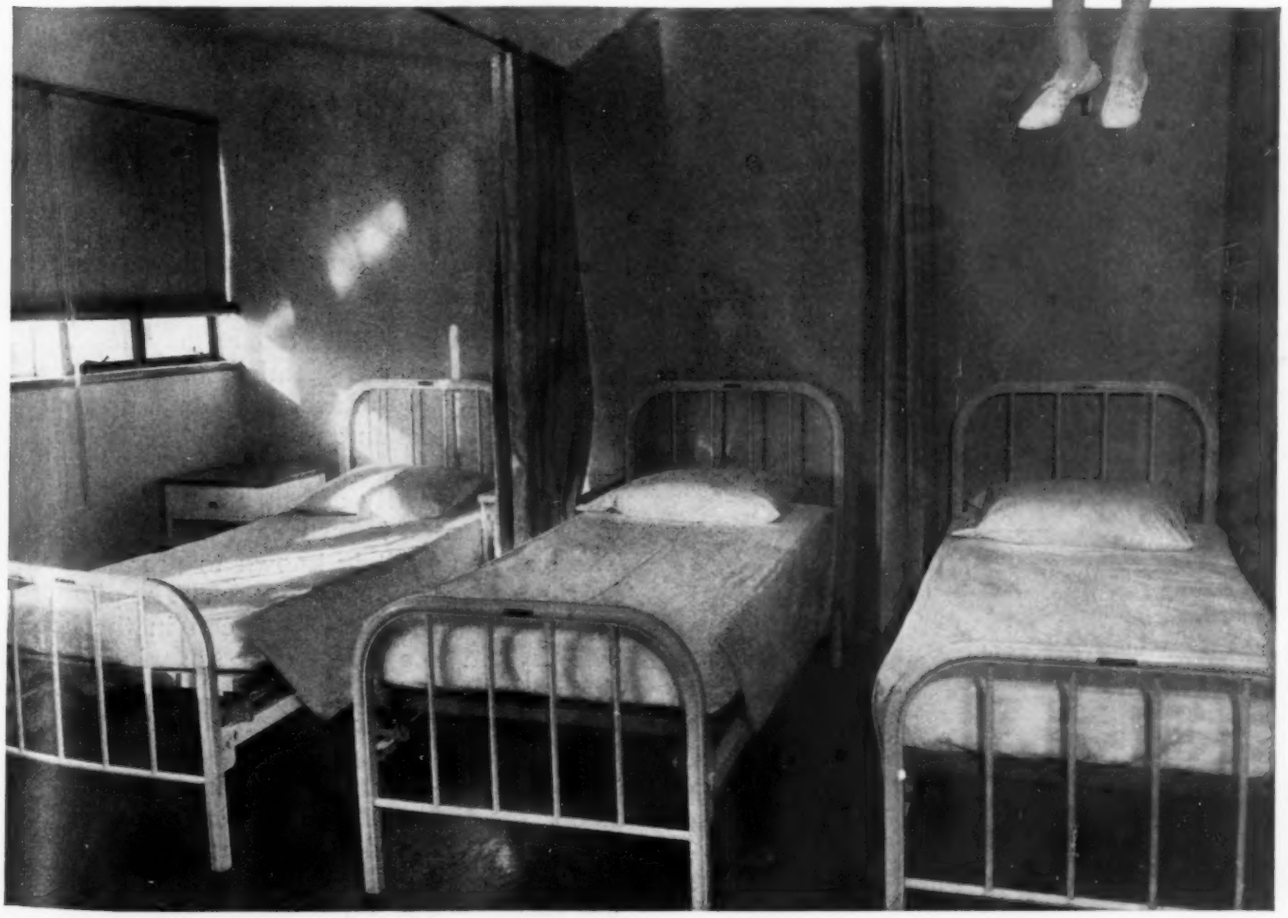
After a year and a half of preparations, the medical department of the Fair opened the facilities of its six first aid stations for its estimated 40 million summer guests. It had been serving the employees on the site since the first one registered.

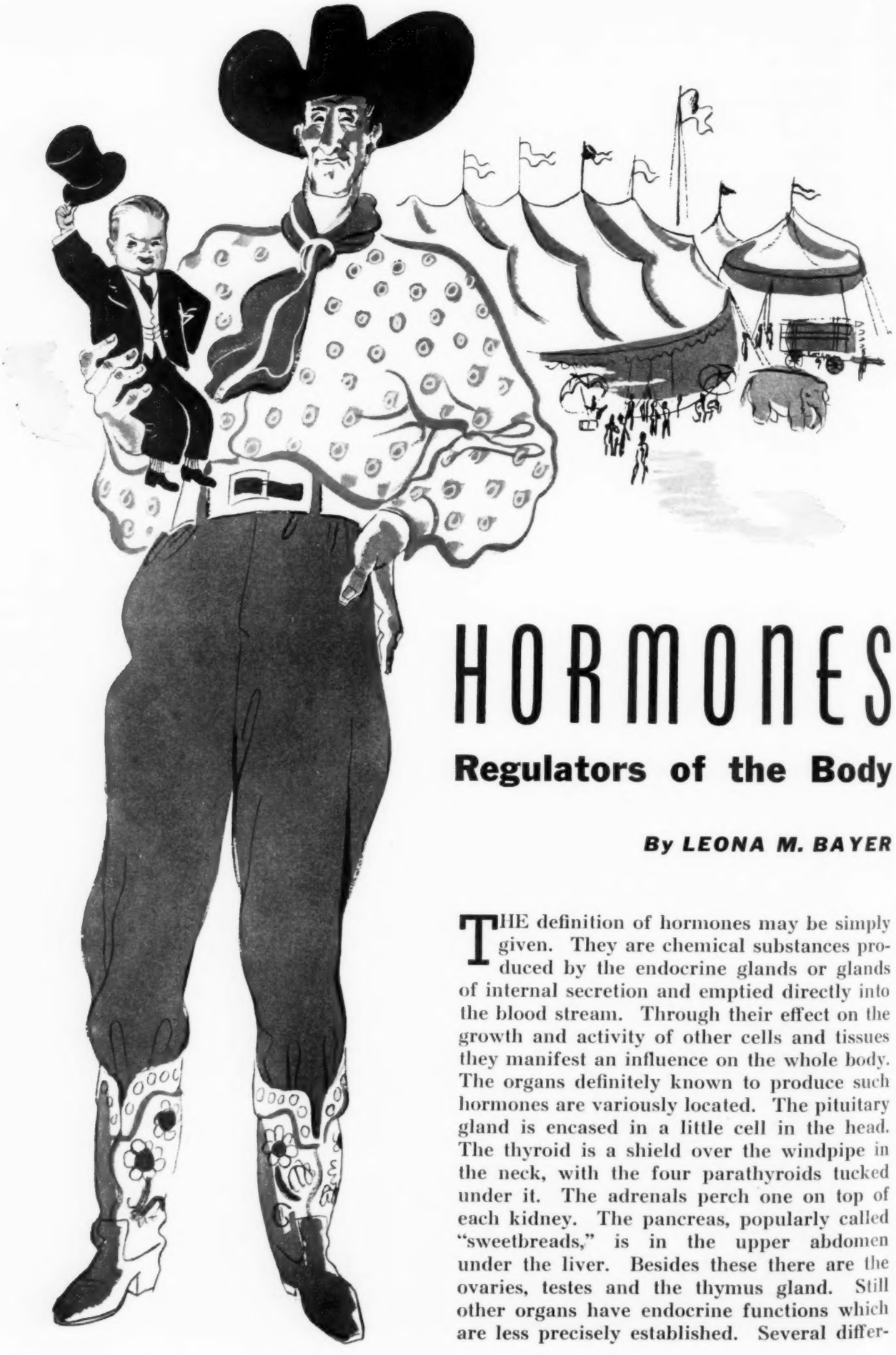
Although the work was not interesting scientifically, it was found that the physicians and nurses welcomed its novelty. There were, of course, many patients who took advantage of the fact that the service was free, and who came in for very minor ailments.

There was a tremendous number of sore and blistered feet. These were well and efficiently cared for by the podiatrists who were members of the National Association of Chiropodists and who gave their services without remuneration.

Two kinds of fractures were so frequently seen that they came to be known by the staff as "World's Fair fractures." One was a transverse fracture of the arm near the shoulder, generally occurring in elderly women from falls in the deep step of the buses. The other was a fracture of the foot near *(Continued on page 573)*

X-ray examination is part of the service; the wards are all clean, cool.





HORMONES

Regulators of the Body

By LEONA M. BAYER

THE definition of hormones may be simply given. They are chemical substances produced by the endocrine glands or glands of internal secretion and emptied directly into the blood stream. Through their effect on the growth and activity of other cells and tissues they manifest an influence on the whole body. The organs definitely known to produce such hormones are variously located. The pituitary gland is encased in a little cell in the head. The thyroid is a shield over the windpipe in the neck, with the four parathyroids tucked under it. The adrenals perch one on top of each kidney. The pancreas, popularly called "sweetbreads," is in the upper abdomen under the liver. Besides these there are the ovaries, testes and the thymus gland. Still other organs have endocrine functions which are less precisely established. Several differ-

ent secretions may come from one gland. All these hormones are becoming of increasing medical importance, as science is making one after another of them available for the physician's use.

But this prosaic statement gives no clue as to why such great interest should be attached to these chemical regulators of body function. At the San Francisco exposition, in the Science Building, is a "Hormone Woman." Why is there always a slightly excited crowd around this booth, while two aisles away only a few sober looking visitors solemnly study the excellent demonstration of hearts, lungs and stomachs? Why do popular articles on endocrinology so often carry the word "mystery" or "elixir" in their titles?

To the trained physician there is something miraculous about every fact of physiology which has been patiently assembled through the long years of medical history. Nevertheless, it is true that the science of the hormones has a certain special appeal, perhaps because the hormones really have some of the powers which superstition has always ascribed to the sorcerer's potion. Through their good offices are encouraged harmonious growth, maturity and nutrition. From their malfunctioning may result dwarfs, giants, imbeciles. Many a monster and changeling of history can now be described in terms of caprices of their endocrine glands.

In a normal life span, the endocrine glands, like other parts of the body, perform their duties without any one's awareness and without outside interference. By delicate rearrangements in balance, they regulate the individual in his period of growth through the great crises of puberty and menopause and through the gentle decline of senescence.

But when their interaction becomes in some way upset, the results may be spectacular. Commonest symptoms identified with hormone disturbance are in the sphere of quantitative complaints. Endocrine imbalance may result in great extremes of growth—the lack of it as well as an excess of it. Or the evidences of maladjustment may be more subtle. They may account for variations from normal growth in one's hair, for variations from a normal condition of the skin or from the normal metabolic rate.

To clarify the relation of the hormones to such manifold symptoms has been an incredibly complex task. Every gland may be associated with many symptoms. And contrariwise, every symptom may have one or many causes. Ideas from the study of heredity, medicine and nutrition must be an easy part of the working equipment of the physician dealing with an endocrine problem. For instance, a child is brought in because he is too small for his age. Is this because he has a short father and mother? Is there a dwarfed uncle somewhere in the family? Is his diet adequate in protein, vitamins, minerals? Is he otherwise organically sound? All these questions the endocrinologist will consider before he even begins to decide whether a gland could be responsible and, if so, which one.

For hormones are a kind of magic chemical, and the physician who administers them must be a benign and cautious wizard. His first task is always to diagnose the true need of his patient. It would be as foolish for him to give endocrine injections to the boy who requires more milk, as it would be inexcusable to omit the prescription of a daily thyroid pill to the child who is stunted because his thyroid gland is underactive. Every one knows the dire events which followed when Tristan and Isolde drank the love philter.

The investigations by which scientific research brings a new hormone into the service of human ills follow a general pattern which is similar for each new internal secretion. A gland is first recognized as one which produces a hormone. Identification and standardization of the secretion follow. Animal experimentation elucidates its various actions. Human trial is eventually justified. Structure is studied and artificial preparation or synthesis attempted. A wide variety of scientists make contributions to every stage of this vast field of exploration.

The story of insulin for example, opens way back in the times of the Roman empire, when diabetes was first recognized as a disease. Then there is a long gap until a half century ago, when two European investigators showed that complete removal of the pancreas led to fatal diabetes in dogs. From then on, there was a crescendo of theory, trial, error and success, until finally in 1921, F. G. Banting and others made an extract of the pancreas which was rich in the treasure of its insulin hormone. Injections into dogs, started July 1921, quickly showed their effectiveness in burning sugar. Soon work on dog diabetes had progressed so far that human injection was warranted. Banting made the first experiments on himself. By Jan. 10, 1922, he was ready to start injections of the extract into a human case of diabetes.

From then on, progress has been rapid and constant. But the final chapter is not yet writ-

ten. Scientists still hope to synthesize the drug and eventually perhaps to find a form which can be taken by mouth instead of by needle. And even so, hundreds of thousands of individuals in the United States alone are already benefiting from insulin.

From the practical point of view, the importance of a given hormone depends more on its general usefulness than on its spectacular action. Those hormones can be considered especially important where the need for them is widespread, where they are available in quantities which approach the need and where the price is within reach of the suffering public. By such standards, thyroid extract, insulin and some of the sex hormones are at present the more valuable preparations.

The kinds of conditions in which physicians contemplate endocrine treatment are roughly of two sorts: those in which there is too much of a given hormone and those in which there is not enough. Symptoms identified with a deficiency are treated by replacement. Symptoms identified with overproduction may respond to surgical or x-ray removal of the offending gland.

Among the disorders of growth, dwarfism is one which has particularly attracted the attention of endocrinologists. Growth may be retarded for many reasons. But physicians can now isolate cases which can probably be helped by thyroid extract. Others, of a different sort, deserve a trial with extracts of the pituitary gland.

Giantism, on the other hand, may have as a glandular cause either overaction of the pituitary or underaction of the sex glands. In the first condition, the pituitary must be stopped by the x-ray or by surgery.

The readjustments of adolescence can often be aided by the cautious administration of selected glandular products. A too slow change from childhood to manhood can sometimes be speeded up by correct exhibition of hormones. But in neither sex has the pimply skin of puberty been as yet much helped by endocrine therapy. Fortunately, however, the vigorous use of soap and water and an ascetic restraint with regard to candy and soft drinks will usually clear the complexion very well.

Throughout the whole adult life of a woman, disturbances in menstruation, while themselves of no great significance, are often the clue which starts the physician on a successful search for a remediable hormone imbalance.

Around the fifth or sixth decade, both men and women may experience symptoms associated with the change of life or menopause. The ovaries and testes gradually cease to function. Their normal inhibiting effect on the pituitary is withdrawn, and the resultant excessive activity of this gland may set in motion a series of responses in other glands and in the nervous system leading to sensations of irritability, fatigue, hot flashes. Administration of potent sex gland extracts, following careful clinical diagnosis, may restore the body balance and often completely relieve the symptoms. But much judgment must be exercised.

Among the more specific disease entities of endocrine origin, diabetes due to insulin deficiency has already been mentioned. Its mirror image, in which excess insulin production leads to ravenous appetite and exhaustion, may require removal of part of the pancreas.

The relief which surgery brings to the patient with the staring eyes, large neck and nervous excitement of hyperthyroidism is familiar to all. This picture also has its opposite, a "thick skinned" listless apathy, which the administration of thyroid can boost into a state of physical and mental alertness.

Another rare condition, adrenal insufficiency or "Addison's disease," has its specific remedy in adrenal cortical hormone. The gasping breath of the asthmatic is dramatically eased by a different extract of the adrenal, widely known and used as adrenalin or solution of epinephrine, although asthma has no established connection with the adrenal gland.

But space is too short to permit even brief consideration of all the derangements of body and soul which are attributed to the misbehavior of the hormones. There are removable tumors of adrenal and sex glands which result in feminine men and Amazon women. There are other tumors which lead to an accelerated maturation of children. When the parathyroids are overproductive or underproductive, they create bizarre but curable disease states.

As each new hormone is harnessed for medical use, the frontier of challenging complaints moves outward. While established knowledge becomes the working equipment of every doctor and is put at the service of every patient, the endocrinologist continues to explore in a twilight zone of discovery.

But even the best known hormones remain potent and formidable medicines. The patient who attempted to use them without medical guidance might soon be like the sorcerer's apprentice who put the broom in action and was almost drowned in the water it brought. The hormones, too, will only obey the master.

"WOULD YOU LIKE TO FEEL MY MUSCLE?"

DOCTOR SAYS I OWE A LOT TO LIBBY'S BABY FOODS. MOTHER STARTED FEEDING THEM TO ME WHEN I WAS ONLY 6 WEEKS OLD!
NET WEIGHT 4½ OZ.
Libby's
HOMOGENIZED
(EXO-CELLULAR)
BABY FOODS
COMBINATION 8
BANANAS, APPLES, APRICOTS
FRUITS

Gee—but it's wonderful to be a modern baby! We get to enjoy so many new advantages.

Vegetables and fruits, for instance, when we're only six or seven weeks old! Doctors know these foods give us precious minerals and vitamins that help us build strong bodies.

But these foods must be specially prepared—so we can digest them easily.

Libby's Baby Foods are widely recommended as baby's *first* vegetables and fruits because they're extra fine and smooth in texture—*extra easy to digest.*

And that's because Libby's Baby Foods are prepared in a *different* way. First they're strained—and then they're specially homogenized.

Ask your doctor when *your* baby is ready for Libby's Baby Foods.

Libby's Baby Foods are first strained—then specially homogenized—to make them extra easy to digest.

(Available at your dealer's—or he can easily get them for you)

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

The American Medical Association Council on Foods has accepted Libby's Baby Foods as suitable for feeding to babies as young as one or two months of age.

* Special homogenization of baby food vegetables, fruits, cereal and soup is an exclusive Libby process that completely breaks up cells, fibers and starch particles, and releases nutriment for easier digestion. U. S. Pat. No. 2037029.

COPR. 1940, LIBBY, MCNEILL & LIBBY

Libby's HOMOGENIZED* BABY FOODS

13 DIFFERENT VARIETIES!

Three Single Vegetables
Carrots · Spinach · Peas

5 Vegetable Combinations
No. 1 Peas, beets, asparagus
No. 2 Pumpkin, tomato, green beans
No. 3 Peas, carrots, spinach
No. 9 Peas, spinach, green beans
No. 10 Tomato, carrots, peas

Cereal Combination
No. 4 Evaporated milk, whole wheat, soya flour

2 Fruit Combinations
No. 5 Prunes, pineapple juice, lemon juice
No. 8 Bananas, apples, apricots

2 Soups
No. 6 Vegetables, chicken livers, barley
No. 7 Vegetables, soya and barley flour

Libby's Homogenized Evaporated Milk—pure, economical, convenient. An ideal milk for babies.

New Booklet about Baby Feeding—FREE
Libby, McNeill & Libby, Dept. H-60, Chicago

Please send me, without charge, beautiful new booklet, "Your Baby's First Vegetables and Fruits."

Name _____

Address _____

City _____ *State* _____

Dealer's Name _____

Are they "vaccinated" against accidents?

AS AN INTELLIGENT PARENT, you know that vaccination helps prevent some diseases which formerly brought suffering and death to children.

There is still another major hazard of childhood against which youngsters can, in a sense, be "vaccinated."

▶ Each year in this country, about 3,600 children under the age of 15 are killed by *automobile accidents*. In addition, approximately 200,000 are injured, many crippled for life.

Many such accidents are *preventable*. This is indicated by the significant way motor fatalities among children have decreased wherever intelligent preventive action has been taken by teachers, school administrators, police, and civic groups. These people have accomplished an enormous amount of good by establishing school safety councils, promoting the use of playgrounds and play streets, and introducing safety education in schools.

▶ But...much of this "vaccination" of the young against accidents must be administered right where the problem strikes most keenly—*in the homes of the children.*

▶ You can safeguard *your* children with this type of "vaccination" by properly preparing them to meet hazards of the streets and roads—from the time they can toddle outside the door. Warning, training (and, of course, good example!) should be patiently and continuously aimed at establishing good safety habits.

These habits may at first be based on the repetition of such simple rules as:

"Stay on the sidewalks!"
"Keep away from automobiles!"
"Don't run into the road after playthings!"

Then, later, as the child grows older:

"Don't step into the street from behind parked cars!"
"Look both ways before crossing — and start only when the way is clear!"
"Cross at corners only—and wait for the 'go' signal!"

▶ You can do a great deal to safeguard the lives and limbs of not only *your* youngsters, but of all youngsters in your community.

For further help in this work, send for Metropolitan's free booklets, "Calling All Drivers" and "The Junior Safety Volunteer." Write today to Dept. 640-Z.

COPYRIGHT 1940—METROPOLITAN LIFE INSURANCE CO.

Metropolitan Life Insurance Company

(A MUTUAL COMPANY)

Frederick H. Ecker,
CHAIRMAN OF THE BOARD
Leroy A. Lincoln,
PRESIDENT
1 MADISON AVENUE, NEW YORK, N. Y.

Plan to visit the Metropolitan's exhibits at the ***New York World's Fair*** *and at the* ***Golden Gate International Exposition in San Francisco.***

YOUR WITNESS, DOCTOR!

(Continued from page 492)

wager that your doctor is much fatigued himself after a full day of taking careful histories. But he is getting to the bottom of things, and when he has finished, he will begin his physical examination. Although he must investigate every part of your physical being, his word examination has given him his clues. He will concentrate on certain organs. He will make fluoroscope and x-ray examinations or take blood counts or suggest other examinations only because he has had the leads which he might otherwise have overlooked.

Be glad when your doctor is sufficiently interested in you to spend time on a lot of questions. Given time, physical examination, laboratory help and all those questions, the modern doctor is quite adept at getting his man.

HEADACHES and YOUR LIVER

Disease of the liver and its ducts, commonly blamed by patients with migraine as a cause of their distress, is not responsible for this condition and may even have a beneficial effect on its symptoms, Carl G. Morlock and Walter C. Alvarez, Rochester, Minn., declare in *The Journal* of the American Medical Association.

In migraine the appearance of bile, which is the secretion of the liver, during vomiting has led many patients to believe that the seat of the trouble must be in the liver. Actually the vomiting of bile may mean only that before or during the act there was reverse peristalsis or wavelike contractions in the upper part of the small bowel, a phenomenon common in vomiting, regardless of the cause.

The authors found migraine in only half as many patients with liver diseases as in the same number of patients with no liver disturbances. Furthermore, in half of those patients who had both liver disease and migraine, the latter condition either disappeared or became less severe after the disease in the liver made its appearance.

To study the phenomena of disease without books is to sail an uncharted sea; while to study books without patients is not to go to sea at all.—Osler.

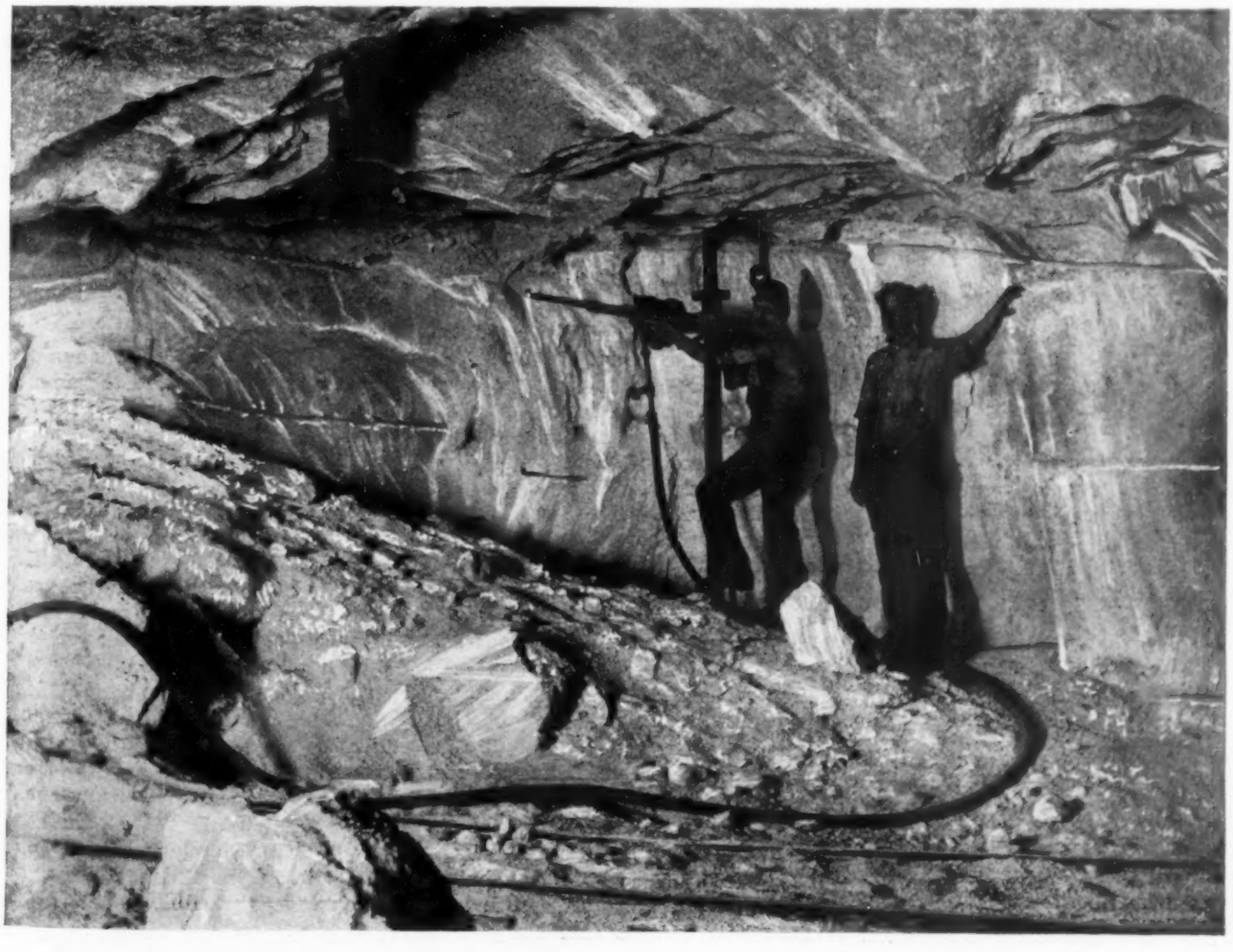
IODIZED SALT

IODIZED SALT is ordinary salt (sodium chloride) to which a definite quantity of a suitable iodine compound (usually sodium or potassium iodide) has been added. The Council on Foods of the American Medical Association has accepted brands of iodized salt that contain approximately 160 parts of iodine per million parts of salt (one part sodium or potassium iodide to 5,000 parts salt).

Iodine is a chemical element essential for normal nutrition. Iodine is necessary in the making of a secretion of the thyroid gland, thyroxin, which has powerful effects in regulating growth and the use of energy by the body. Although little iodine is needed, failure to get enough may result in the disease known as simple goiter.

Human beings ordinarily get their supply of iodine from food products, which in turn have obtained it from soil or water. Small amounts are present in some drinking waters. Sea foods are all rich in iodine. Seaweeds, sponges and other marine plants and animals have great capacity for absorption of iodine from sea water. There is, however, a considerable area in the United States where there is little iodine in the soil and water supply; thus the food crops are poor in iodine. It is extremely difficult to define this area exactly, because it has no boundaries, and there are sections within the area in which there is an adequate amount of iodine in the soil and water. But generally speaking, the area includes all but the regions along the Atlantic and Pacific seacoasts and the Gulf states.

The prevention of goiter in most persons living inside this area depends on the regular addition of a definite small quantity of an iodine compound or a sufficient quantity of an iodine-rich food to the diet which is inadequate in this element. A practical method for dispensing the necessary additional iodine is to supplement that which is naturally present in food and drink with iodized table salt.



Drilling holes 700 feet below the surface prepares this solid salt for blasting. This is the first step in procuring salt for your table—digging it out!

by the

A.M.A. COUNCIL ON FOODS

Certainly a unique book! "ACCEPTED FOODS" gives authoritative data on more than 3800 advertised food brands . . . their manufacturing processes, composition, nutritive values and name of their manufacturer or distributor. In fact, all products accepted by the Council on Foods, as of September 1, 1939, are included . . . extensively indexed, conveniently classified, and impartially discussed as to their nutritional significance.

SECTION HEADINGS

Work of the Council on Foods
Fats and Oils and Their Products
Fruit Juices, Including Tomato Juice
Canned and Dried Fruits and Fruit Products
Grain Products
Preparations Used in the Feeding of Infants
Meats, Fish and Sea Foods
Milk and Milk Products Other Than Butter
Foods for Special Dietetic Purposes
Sugars and Syrups
Vegetables and Mushrooms
Unclassified and Miscellaneous Foods

512 PAGES
5½ x 8 inches
Attractively Cloth Bound

$2 Postpaid

Use This Coupon To Order

HY. May 40
AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street, Chicago

Please send ... copies "Accepted Foods."
Remittance for $.... is enclosed.

NAME.....

ADDRESS.....

Although supplementary iodine supplied through iodized salt may prevent goiter that would otherwise occur, the cure of goiter is a medical problem. All persons who have a goiter should be under efficient medical supervision. Further, the Council on Foods cautions that all persons over 30 with a swelling on the neck should consult a competent physician before taking any iodine preparation.

The value of a salt rich in iodine as a preventive of goiter was suggested by Boussingault, a French chemist, in 1833. Another Frenchman, Chatin, showed in 1850 a significant correspondence between the amounts of iodine present in water and foodstuffs in different areas and the regional incidence of goiter. But the first large scale experiment in goiter prevention with iodine in man was begun in this country in 1917 by two physicians, Marine and Kimball. The results of this and other studies established the value of iodine in the prevention of simple goiter.

In 1924 the Wholesale Grocer's Association and the Salt Manufacturers Association cooperated in placing on the market a table salt containing 1 part of potassium iodide to 5,000 parts of salt and urging customers to buy it.

In 1935 a report was published of a ten year study of goiter prevention in Michigan which showed that children taking small amounts of iodine in the form of iodized salt are not so likely to have simple goiter as those who do not take it. Other reports likewise have called attention to the good results from the use of iodized salt.

IODIZED SALT

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

The following brands of iodized salt have been accepted by the Council on Foods of the American Medical Association and are described in the book "Accepted Foods and Their Nutritional Significance," published by the American Medical Association.

Barton's Iodized Free Running Salt
Carey-ized Iodized Salt
Chippewa Iodized Salt
Diamond Crystal Iodized Salt
Fairway Iodized Salt
Jefferson Island Iodized Salt
Leslie Iodized Salt
Morton's Iodized Salt
Mulkey's Iodized Salt
Pioneer Iodized Salt
Plee-Zing Iodized Salt
Purity Iodized Salt
Sterling Iodized Salt
Watkins Iodized Salt
Worcester Iodized Salt

PROTEIN IS THE "STUFF OF LIFE"

Protein is used for building tissue throughout the body. It makes up the chief part of the muscles, tissues and organs on the inside—as well as the skin, hair and nails on the outside. Each of these proteins is made up of simpler materials, called the aminoacids. These aminoacids are formed when the proteins of food are digested; and it is the aminoacids that are actually used to build body tissues and fluids.

So far, twenty-two aminoacids have been found to make up proteins. These aminoacids may be compared to the letters of the alphabet. As the letters of the alphabet combine to form words, these aminoacids combine to form food proteins, which in turn combine to form living tissue.

Practically the whole alphabet of twenty-two aminoacids is used to make the proteins that compose a human being. But the really high quality proteins are the "complete" proteins that contain all the aminoacids that the body must get from food.

Milk, cheese, eggs, meat and fish supply generous amounts of complete proteins. For children, who need a good supply of protein, milk is considered the best source. The proteins of muscle meat do not rank as high as those of eggs or milk; but meat organs are rich in proteins of high nutritive value.

Cooking protein foods the right way is also important. Milk dishes, cheese dishes, meats and eggs all need to be cooked at an even, moderate temperature. Slow cooking at a moderate heat is the best way to insure tender protein foods and to make the finished dishes as appetizing as possible.—*U. S. Dept. of Agriculture.*

DEADLY DISEASE NUMBER 5 (Continued from page 520)

A review of the statistics of the causes of sudden death, in which the outstanding characteristics are sudden loss of consciousness and paralysis, demonstrate that the diagnosis of cerebral hemorrhage may be difficult, if a true history of the onset and previous condition of the patient are not known. Particularly in emergency hospitals, where patients are brought who have suddenly lost consciousness on the street or during the course of their occupation, it is found that the diagnosis of the causes of unconsciousness may be extremely difficult, even in the hands of those who have had considerable experience.

A patient who has suffered from cerebral hemorrhage may die in a fall. If the fall is not observed and if the injuries are in the scalp tissues, it is difficult at first to tell whether it was an accidental or a natural death. In certain heart diseases, sudden loss of consciousness and convulsions occur that may be confused with the onset of cerebral apoplexy. In a few instances of brain tumor, a sudden change in the brain tissue leads to swelling, and because of this, paralysis and loss of consciousness may set in rapidly.

A few of the diseases that can be confused with true cerebral hemorrhage are mentioned to acquaint the layman with the necessity of investigation where the patient has died following a period of unconsciousness, in which the onset has not been adequately observed. Under these conditions, instances of criminal assault and accidental death may be improperly interpreted.

The diseases that affect the brain to an extent that brings on unconsciousness are serious. If an adequate diagnosis can be made, it is often possible that considerable relief can be obtained. Examples of these are the stupor of diabetes mellitus, certain hemorrhages resulting from external injury and the acute manifestations of swelling of the brain associated with brain tumor. The means for diagnosis are available in well equipped hospitals. Immediate medical attention is necessary, and if the patient is cared for by a physician in a hospital that has adequate facilities for rapid diagnosis, the maximum has been done for that particular patient.

Unfortunately, sudden loss of consciousness with symptoms simulating cerebral hemorrhage frequently occurs where the facts for obtaining a diagnosis are lacking. Death may ensue before proper diagnosis can be made. Under these circumstances, it becomes necessary to establish the cause of death by postmortem examination and thus eliminate accidental causes or criminal assault.

Diseases of the group generally classified as cerebral apoplexy present some of the most difficult diagnostic problems that physicians ever encounter. When adequate information has been made available, those interested in the victim must realize that the attending physician has been presented with a problem which he may not be able to solve adequately. The solution of the problem in that case must then be referred to the proper legal authority, namely, the coroner or medical examiner of the city.

The prevention of cerebral hemorrhage rests with the treatment of high blood pressure and advice to a patient about methods of living that reduce the factors that are known to elevate the blood pressure. But it must also be remembered that elevated blood pressure, even though it is one of the important predisposing causes of cerebral hemorrhage, is only occasionally followed by cerebral hemorrhage. In other words, the incidence of cerebral hemorrhage is low when compared to the number of persons who have some degree of high blood pressure.

BURNS AND FALLS ARE BIG HOME HAZARDS

Precautions against burns and falls continue to be among the most important preventive measures to be taken in the home. *The Journal* of the Medical Association of the State of Alabama reports that burns and falls caused six out of every ten deaths from accidents occurring in farm homes in Alabama during the period of 1933 to 1938. The report does not include deaths of persons employed in farming pursuits outside the home.

Children, and grown-ups too, like the garden-fresh flavor and bright colors of vegetables cooked this new fast way. Spinach, peas and asparagus cooked in 1 to 2 minutes. Broccoli, cabbage and carrots in 2 minutes. Meats made deliciously tender with less shrinkage; stews, cereals and fruits all prepared over a low burner in a fraction of the ordinary time. Doubly important, more of the precious vitamins and mineral salts are saved. Three sizes—

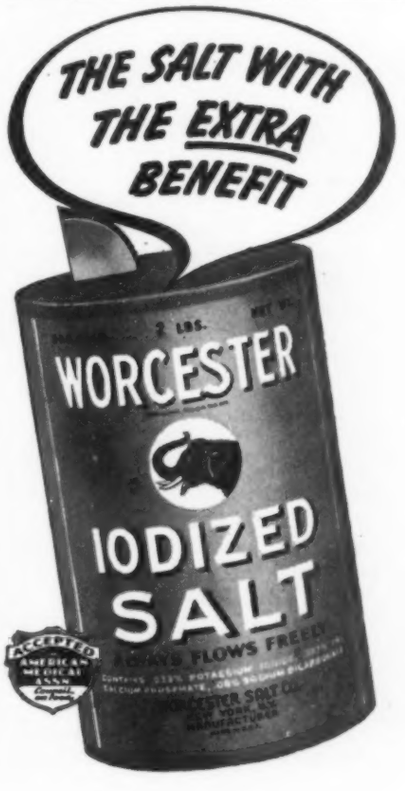
2 qt. $9.50 3 qt. $10.50 4 qt. $11.50

(Higher west of Rockies)

NATIONAL Presto COOKER

See your leading housewares or department store or write
NATIONAL PRESSURE COOKER CO.
DEPT 17 EAU CLAIRE, WISCONSIN

HAVE *YOU* RENEWED YOUR HYGEIA SUBSCRIPTION?
Do it now so that you won't miss a single coming issue!



Cold Facts about Ice Cream

By HARRIET MORGAN FYLER

ICE CREAM is the American dish par excellence. In one form or another—in cones, pies, sandwiches, on sticks, plates, in glasses; strewn with sirup and submerged in carbonated water; molded into bricks, Christmas trees, Valentines, Lincoln logs, George Washington hatchets, Easter rabbits and lodge emblems—275 million gallons or 8,500,000,000 portions of ice cream and 9 million gallons of assorted ices are consumed in the United States yearly. Unaccounted for in these figures are the unknown quantities frozen at home in hand-turned freezers or in the ice-cube compartments of refrigerators and the considerable amounts produced in plants making less than 5,000 gallons each per year.

The degree to which the ice-cream custom has penetrated our mores is shown by the following bits of Americana: A national ice cream week, ice cream eating championship, last won in October 1937 by a Harvard undergraduate who gorged himself on nineteen platefuls, beating out his competitor and fellow scholar by one plate. During the last presidential election, soda fountains featured a Republican "Sunflower Sundae" composed of slices of banana arranged around vanilla ice cream covered with chocolate fudge.

Mankind's predilection for chilling his palate is neither new nor localized. When Marco Polo came back from the Orient in the fourteenth century he startled the Italian citizenry with gaudy tales of slant eyed men sitting on embroidered cushions eating dishes of ice, brought from the mountains by camel pack, flavored with exotic fruits. From Italy the custom of eating ices spread to France through the Medicis in the sixteenth century. French chefs improved the water ices and developed cream ices and the formula went to England as a court secret, where it became more generally used. The Colonists brought the formula to America early in the eighteenth century.

America's contribution to ice cream was the practice of congealing the custard in mechanical freezers instead of placing it on ice, as we still do with parfaits and mousses. An entry in George Washington's account book for May 17, 1784, describes a "cream machine" for making ice cream, but the first American patent on a freezer was not issued until 1848. In 1849 the important step of blowing air into the ice cream mix was discovered and forgotten in the fury of discussion of whether the dasher should revolve within the can or the can revolve around the dasher.

The part ice cream played in the early social and political history of our capital is illustrated by this comment on a party attended by the Founding Fathers at the second inaugural of President Madison: "Mrs. Madison always entertained with grace and charm, but last night there was a sparkle in her eye that set astir an air of expectancy in her guests . . . When finally the brilliant assemblage, America's best, entered the dining-room, they beheld . . . in the center, high on a silver platter, a large, shining dome of pink ice cream!"

In the gay days of 1890 it was the wont of bon vivants to wheel up to the village confectionery, to sit elegantly on a bent wood chair and quaff an ice cream soda. The appearance of ice cream on the home table in those days always

Black Box, N. Y.

marked a birthday dinner or a Fourth of July celebration. Today ice cream is served at some 90,000 fountains where persons climb up on upholstered stools and cool their tonsils with vanilla, chocolate or strawberry. (Paradoxically, considering the variety and quality of the flavors at hand, Americans still stick closely to their old favorites, vanilla, chocolate and strawberry.) And in urban suburbs, if Mahommet won't go to the ice cream, bicycle carts full of frozen ice cream bars come to Mahommet.

Today the making of ice cream is an important industry and accounts for about one sixteenth of our milk supply. The quantities produced commercially in 1939 used up about 192 million pounds of sugar, 136 million pounds of butterfats, 137 million pounds of milk solids other than fats and 4 million pounds of gelatin.

Ice cream is a term applied to a variety of frozen products, but in its usual form it is a product that contains rich milk and cream. Sherbet is made from water, milk, fruit juices with or without egg white, flavored and frozen to the consistency of ice cream. Ices are made from water. All have gelatin or similar substances to regulate the size of the ice crystals and, of course, large quantities of air.

The procedure for making ice cream calls for beating the "mix" to more or less fluffiness and then hardening it. During the beating process the volume of ice cream in the freezer increases because of the incorporation of air; this is technically referred to as "swell" or "overrun." The percentage of overrun is a question of density; 100 per cent overrun means ice cream of 50 per cent density, and 70 per cent overrun means ice cream of about 60 per cent density. Most ice creams have between 100 and 50 per cent overrun, though it is not unusual to find ice cream with as much as 130 per cent overrun. At present there are no federal or state regulations for the amount of overrun. The federal government in buying for its institutions specifies ice cream of not more than 100 per cent overrun, or about 50 per cent air. In other words, ice cream bought by the government must weight at least 4½ pounds to the gallon. That figures out at 1 pound and 2 ounces to the quart or about 9 ounces to the pint. The Association of Quality Ice Cream Manu-

FAMOUS WORDS OF ADVICE—

1. "Don't Give Up the Ship!"

2. "Put Your Best Foot Forward!"

3. "Discretion is the Better Part of Valour!"

4. "DRINK POSTUM, INSTEAD!"

AS A LOVER OF COFFEE you'd certainly hate to hear the doctor say—"No more coffee!" But if you have been told to give up coffee, heed the advice that many doctors give, "*Drink Postum, instead!*"

Then, you needn't worry about going without a good, satisfying drink at mealtimes. For, served piping-hot or ice cold, Postum has the tempting fragrance and delicious flavor that will soon make you forget forbidden beverages. And Postum is now a favorite in over 3,000,000 American homes!

Postum contains no caffein—no harmful stimulants. It is simply whole wheat and bran, roasted and slightly sweetened.

Easy to make—Economical, too!

Postum is delicious and easy to make. And economical (about ½¢ a cup). Postum is a product of General Foods.

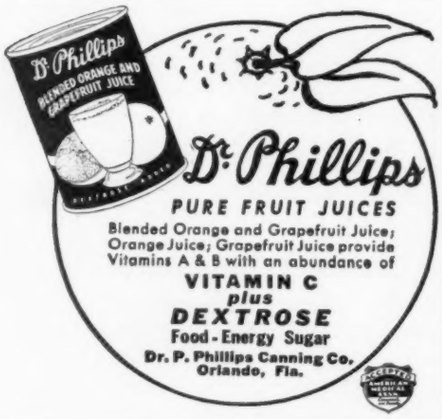
Copyright, 1940, General Foods Corp.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

ASK YOUR DOCTOR ABOUT POSTUM

THIS TOMATO JUICE IS NEVER THIN OR WATERY

Always drink Kemp's Sun-Rayed—the pure, undiluted juice of WHOLE tomatoes. Delicious. The Sun-Rayed Co., Frankfort, Indiana.



D. Phillips

PURE FRUIT JUICES

Blended Orange and Grapefruit Juice; Orange Juice; Grapefruit Juice provide Vitamins A & B with an abundance of

VITAMIN C plus DEXTROSE

Food-Energy Sugar

Dr. P. Phillips Canning Co. Orlando, Fla.

Do You Need Health Material?

Send for free catalog—

"Health Publications of the American Medical Association"

American Medical Association, 535 N. Dearborn St. Chicago

America's Favorites

DURKEE'S DOUBLE FLAVOR VEGETABLE MARGARINE

• Made by a new process that whips the goodness of the pure, pasteurized fat-free milk and wholesome vegetable oils right into the product.

DURKEE FAMOUS FOODS, Chicago, Ill., Norwalk, O.

DO YOU LIKE GOOD CREAM CHEESE?

HAVE YOUR DEALER SHOW YOU THE NAME

Breakstone's

WHEN HE CUTS YOUR ORDER

Naturally Sweet

NO SUGAR ADDED

CHURCH'S GRAPE JUICE

Church Grape Juice Co., Kennewick, Wash.

facturers, a group organized to encourage higher standards of ice cream manufacture throughout the country, adopted the standard that "all finished ice cream shall weigh net not less than 4.25 pounds per gallon."

Since no federal standards exist at present for ice cream, it is impossible to state definitely the composition of commercial ice cream, as the materials used and the formula adopted vary with the manufacturer responsible. Every state, however, has a minimum standard for butter fat content, ranging from 8 to 14 per cent. Many states regulate also the percentage of total milk solids, including butter fat, which by a simple process of subtraction gives consumers the minimum legal percentage of milk solids not fat. The minimum legal percentage of total milk solids in the states runs from 18 to 20 per cent. Some states prescribe a minimum percentage for all solids of from 30 to 35 per cent.

The standards of the Association of Quality Ice Cream Manufacturers for ingredients require that "all ice cream shall contain milk fat in an amount not less than 12 per cent and no other fats shall be used with the exception of cocoa fat in chocolate ice cream. All ice cream shall contain milk solids not fat in an amount not less than 9 per cent. Gelatin may be used, provided the amount does not exceed one half of one per cent."

Ice cream is a wholesome food. Its nutritive value depends on its density. The average composition of ice cream of not more than 100 per cent overrun (50 per cent density), is protein 4 per cent, fat 12 per cent and carbohydrate 21 per cent. The usual serving of such ice cream, ⅔ cupful or 3½ ounces, provides about 4 Gm. of protein, 21 Gm. of carbohydrate, 14 Gm. of fat, 0.08 Gm. calcium, 0.08 Gm. of phosphorus and vitamin A and vitamin G (riboflavin). Such a serving also furnishes 226 calories.

There are few foods that furnish as much calcium as ice cream. In the amounts that are customarily eaten, ice cream may be considered a good source of calcium.

The milk fat in ice cream is readily digested because of the homogenization process which evenly disperses the fat globules. Only milk fat derived from fresh milk is present in ice cream.

Aside from the pleasure of eating ice cream and its nutritive value, the question of purity looms up as the first consideration of the thoughtful consumer when purchasing ice cream. The purity of ice cream is under the control of local health departments. Some health departments require the pasteurization of all milk products in ice cream, and a few stipulate that not only the milk products but the whole "mix" must be pasteurized on the premises where frozen.

Manufacturers of ice cream, who are members of the Association of Quality Ice Cream Manufacturers, follow the practice of pasteurizing not only the milk ingredients but also the whole "mix" on the premises where frozen, regardless of whether or not the local law requires it.

According to the rules and regulations of this association, "All manufacturing personnel is subject to periodical physical and laboratory examination by a qualified physician. The plant and ice cream ingredients of each member are subject to bi-monthly inspection by an independent laboratory to assure safe plant bacteriological control."

Sanitation of ice cream plants has made revolutionary progress, so that most plants of sufficient size to do wholesale business can take pride in showing visitors through the entire plant. Ice cream manufacturers are outstanding in their use of technologic and scientific developments for the improvements of their product. About half the wholesale cost of ice cream represents the expensive sanitary conditions under which it is produced. Fed into continuous freezers, it is turned from a soupy mixture to a frozen mass in ten seconds flat and stored to harden in rooms at temperatures as low as —50 C.

Generally speaking, ice cream that is packed in containers and sealed at the manufacturing plant can be expected to be of higher purity than the ice cream that is scooped out of a 10 gallon can at the corner drug store.

Consumers who buy ice cream today can usually count on getting for their money a product immensely improved over what they were able to buy twenty years ago. The food value of ice cream has been increased because the contents of milk solids have been raised and higher standards dictate the selection of ingredients.

For babies who deserve the best!

Serve them Heinz Strained Foods — backed by a famous 70-year quality reputation! They're scientifically cooked and vacuum-packed to retain vitamins and minerals in high degree!

YOU'LL FIND everything you demand in food for your baby—*flavor, purity, uniformity*—in Heinz Strained Foods! Prepared with the care and skill that have made the name *Heinz* famous for over 70 years, these foods are high in nutritive value—rich in tempting flavor and appetizing color! Prize fruits and vegetables, select meats and cereals are cooked scientifically—vacuum-packed in special enamel-lined tins. Serve your baby these delicious foods. They cost no more than ordinary brands!

HEINZ BRINGS YOU THESE FOUR VITAL ASSURANCES OF QUALITY!

1 VITAMINS AND MINERALS are preserved in high degree by scientifically cooking top-grade fruits and vegetables—and vacuum-packing them in special enamel-lined tins.

2 THE MOST MODERN, scientific cooking and packing methods have been developed by Heinz specialists in the Mellon Institute of Industrial Research.

3 FURTHER ASSURANCE of uniform excellence is furnished by the constant research work of scientists in Heinz Quality Control Department.

4 TO INSURE FRESHNESS, all varieties on dealers' shelves are checked regularly by Heinz salesmen and replaced by fresh stocks after a limited time. *Quality is controlled from Heinz kitchens to consumer.*

Heinz Strained Foods

57

THESE TWO SEALS MEAN PROTECTION FOR BABY

Scientifically prepared to furnish older babies with the coarser, highly nutritive foods they require, Heinz 12 new Junior Foods are well balanced, fine flavored and ready to serve. Order a supply for your growing youngster!

Heinz Junior Foods

SALLY: Perhaps you've heard about Post's 40% Bran Flakes, Dot! The most marvelous-tasting breakfast cereal you ever put in your mouth!

DOT: Goodness—it *must* be delicious for you to be so enthusiastic about it, Sally!

SALLY: Yes, and Post's Bran Flakes are *much more* than a wonderfully fine-flavored cereal—They give you two important *extra benefits* . . .

First, Post's Bran Flakes provide just enough bran, a *natural* regulator, that helps protect you against sluggishness. People whose systems are irregular, due to lack of bulk in the diet, find Post's Bran Flakes, eaten daily, a wonderful help.

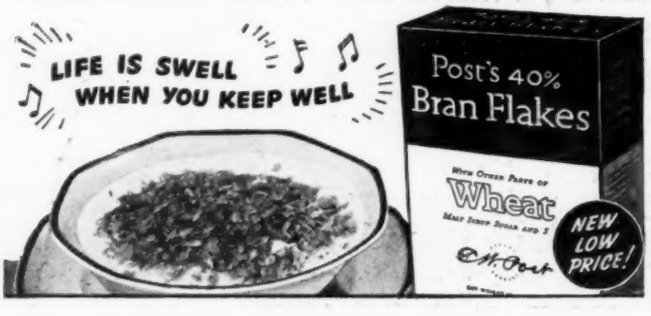
Second, Post's Bran Flakes are a good cereal source of phosphorus, iron, Vitamin B_1 to help maintain appetite . . . and today, Post's Bran Flakes come to you at a NEW LOW PRICE!

SIX MONTHS LATER . . .

DOT: MMM—Don't Post's Bran Flakes have a simply heavenly nut-like flavor! I've been eating them every single morning for the past six months, Sally—and I've been feeling perfectly grand!

SALLY: And you're a different girl, too! Isn't it wonderful to find a cereal that tastes so delicious and gives those *extra benefits,* too!

IMPORTANT: Post's Bran Flakes, due to their bulk, are a regulative cereal. Constipation due to insufficient bulk in the diet should yield to Post's Bran Flakes, eaten regularly—as a cereal or in muffins. For cases not corrected in this simple manner, a physician should be consulted. Post's Bran Flakes are a Post Cereal—made by General Foods.

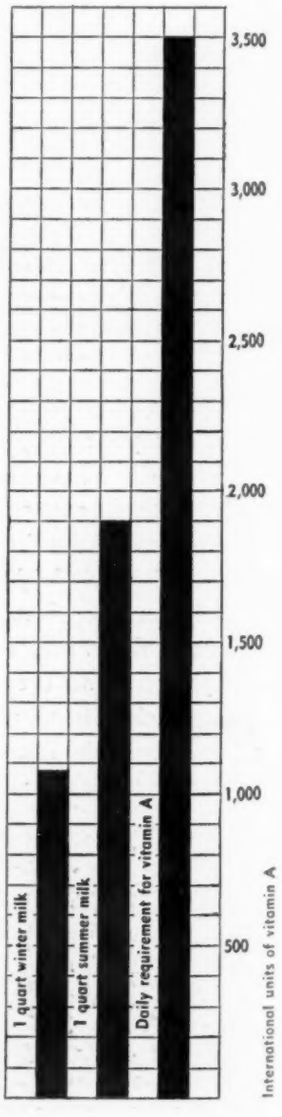


Vitamin A in Milk

Vitamin A is important in normal nutrition. A good diet should provide from 3,000 to 4,000 international units of this vitamin each day, and some authorities suggest even more. Green leafy vegetables, milk and dairy products which contain butter fat are important sources of vitamin A. There has been a lack of sufficient data on the exact amount of vitamin A furnished by natural foods, although improvements in methods of measuring the vitamin are enabling eager investigators to fill the gap. In a recent article published under the auspices of the Council on Foods of the American Medical Association, Professors Dornbush, Peterson and Olson of the University of Wisconsin have reported on the vitamin A content of milk as obtained in the market at different times of the year. This report shows that average market milk contains more vitamin A in the summer (June to October) than in the winter months (January to April).

One quart of winter milk may be expected to provide a little more than 1,000 units of vitamin A, while one quart of summer milk provides about 1,900 units of vitamin A. Approximately one fourth to one half of the vitamin A daily requirements would be satisfied by a quart of milk.

This means that milk is an excellent source of vitamin A, as well as other dietary essentials. The observations emphasize the necessity of giving particular attention to the vitamin A content of the diet if for any reason it is not possible to secure the large amounts of milk properly recommended for daily consumption. Further, more milk and dairy products containing butter should be consumed in winter in order to meet the daily requirement of vitamin A.



"PICTURE OF HEALTH" Prize Winners

(Continued from page 501)

HONORABLE MENTION—One Year Subscription to *Hygeia*

Ben Cooperman, *964 49th St., Brooklyn, N. Y.*

L. Fischer, *1676 57th St., Brooklyn, N. Y.*

Janet Hart, *645 N. Michigan Ave., Chicago.*

Erwin Middleman, *60 W. 68th St., New York City.*

H. E. Severance, *2551 S. Howell Ave., Milwaukee.*

Shune Snow, *74 Kenwood Park, Springfield, Mass.*

Roy A. Stadelman, *Stanley St., Hopkinsville, Ky.*

A. E. Stewart, *830 Union St., New Orleans, La.*

Tuberculosis and Health Society of St. Louis, *911 Locust St., St. Louis.*

Elise Voysey, *Cliff Drive, Bayville, Long Island, N. Y.*

Alois J. Welzenbach, *1320 Linn St., Peoria, Ill.*

Wallace Windus, *235 Radcliffe St., Bristol, Pa.*

As in presenting the final results of all contests, the judges and Contest Editor always regret that there are not more prizes to be offered. This is certainly the case in announcing the winners of our "Picture of Health" contest.

In all, there were 1,324 pictures entered in the contest and 518 entrants, which averages over two photographs to an entry.

In judging the photographs, the health activity which each picture illustrated was kept uppermost in mind; many that were otherwise excellent carried no such meaning at all. Naturally that eliminated those at the start. Other elements that were important to the judges were excellence of photographic technic, human interest and appeal of the subject and authenticity of presentation.

The judges were Torkel Korling, famous professional photographer; Austin A. Hayden, M.D., and Ethel S. Vernon, Art Director of HYGEIA.

It was impossible to publish all the prize winning photographs in this issue of the magazine. Those remaining unpublished will be used in later issues, and a credit line will show that that picture won a prize in our "Picture of Health" contest. The photographer will receive two copies of the magazine in which his picture is used.

The New Pillow Has Arrived!

that is . . .

- DUSTLESS • ODORLESS
- SELF-VENTILATING
- WASHABLE • HYGIENIC

. . . a cool, comfortable Pillow of CELLULAR LATEX to aid allergic discomforts.

Airfoam* PILLOWS

PATENT APPLIED FOR

* Trade Mark Reg. Goodyear Tire & Rubber Co., Inc.

Filled with "Flaked" Airfoam these Pillows literally breathe thru myriads of tiny inter-connecting air cells. AIRFOAM PILLOWS induce real sleeping comfort to individuals hypersensitive to dust or feather fillings and persons disposed to allergic afflictions.

Unique construction of AIRFORM PILLOWS permits folding in any manner, eliminating bad effects of bouncing or spring-back. Slightest pressure nestles head into position for complete relaxation. In bleached Wamsutta coverings at $6.95 (slip-cover extra) at your department or furniture store, or write:

1920 South Western Ave. **MULTI PRODUCTS** DIVISION OF PROTECTOSEAL CO. CHICAGO, ILLINOIS

Vol. III, 232 pages. Amply illustrated. Attractive Green Cloth Binding.

NOSTRUMS AND QUACKERY AND PSEUDO-MEDICINE

$1.50 POST PAID

By ARTHUR J. CRAMP—Director of the Bureau of Investigation of the American Medical Association (1906-35).

PAMPHLETS ON "PATENT MEDICINES"

(Selected chapters from "Nostrums and Quackery")

1. Cancer "Cures" and "Treatments"	33 pages, illustrated,	15c
2. Cosmetics and Allied Preparations	60 pages, illustrated,	15c
3. Female Weakness "Cures"	65 pages, illustrated,	35c
4. Mineral Waters	30 pages, illustrated,	10c
5. Obesity "Cures"	28 pages, illustrated,	15c
6. Patent Medicines	39 pages, illustrated,	15c

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn St., Chicago, Ill.

Please send me "Nostrums and Quackery and Pseudo-Medicine" at $1.50. Or send booklet number..... I enclose $.....

NAME.....

ADDRESS.....

QUESTIONS AND *Answers*

Wallace Kirkland

I operate a linotype machine and would like to know what type of light is best for my eyes.

Shampoos for Negroes

To the Editor:—How should Negroes wash their hair, and what soap should be used? If their hair does seem dry, what would you advise about adding oil? Should the oil be put on the day before the hair is washed or the day after?

E. A. C., Kentucky.

Answer.—The hair of Negroes is shaped differently than the hair of white persons. The shaft of the hair is flattened, and the root is comma shaped. The shaft of the hair of white people is round, and the root is straight; otherwise the hairs are the same. If the glands do not secrete the usual amount of oil, any nonirritating oil can be used. It is best to apply oil after washing the hair. Any bland soap can be used for cleansing. Healthy hair should need little if any added oil.

Light for the Eyes

To the Editor:—What color of light is the easiest on the eyes when used for long periods of time?

I operate a linotype machine, set type, scrutinize printing jobs for imperfections, insert corrections and read type backwards in the daytime. At night, I read or study.

A. B., New Jersey.

Answer.—Numerous experiments with light of different colors indicate that the most effective light comes in the colors of the middle part of the solar spectrum, especially the yellow and yellowish-green. The sodium light should be a good light, especially to recognize print in black ink.

Good light is a bright light on what you have to look at with little light coming to the eyes from other directions. The eyes should always be shaded from light coming directly from the source.

If the sodium-vapor light is attainable and can be kept from shining directly on the eyes, it will probably be the best for this particular kind of work.

Diffused white daylight in the middle of the day is as good as any; but for work that must be done indoors or outdoors in the early morning or evening, artificial light, either white or yellow, is better. Sudden changes of brightness are bad, because the eye can only do its best seeing when it is adapted to the light it has to use.

Ringing in the Ear

To the Editor:—Has any remedy been found for a constant ringing in the ears? Will an operation help this? Why should limiting the amount of salt intake prevent attacks of vertigo [dizziness] which comes from some disturbance in the nerves of balance in the inner ear? Is this type of vertigo caused by a toxic condition? Does the amount of water one drinks have any effect? Does limiting the amount of salt one uses prove harmful to the general health?

E. H., Minnesota.

Answer.—Constant ringing in the ears has been ascribed to many factors, such as drugs, debilitating disease, intestinal disturbances, acute ear infection and advancing age. Relief, therefore, must be directed toward correcting or eliminating the cause.

In certain cases of Ménière's symptom complex, relief of tinnitus [ringing] frequently results from an operation to cut that portion of the nerve which has to do with the balancing apparatus. When the cause of the tinnitus is along the brain pathways, treatment and relief is difficult and unsatisfactory.

In many cases, the cause of Ménière's syndrome [set of symptoms] is unknown. Until the cause is more completely established, the value of limiting the salt intake in the diet for the relief of attacks of vertigo cannot be fully explained.

Investigation by one group has resulted in the belief that the retention of sodium in the body causes the attacks of vertigo. Another group of investigators feels that retention of water is the explanation for the attacks of vertigo. Others feel that the cause is due to bacterial infection. It is probably correct to assume that there is no one primary cause.

Salt is essential for the proper balance and function of the body tissues, particularly the blood elements. A certain degree of salt restriction from the diet may be tolerated for long periods, if the chloride portion is replaced by some compound that contains it.

Hypnosis

To the Editor:—Will you recommend a book explaining the true value of hypnosis in the treatment of the psychoneurotic person? I have read many conflicting statements by psychiatrists regarding this therapy. Also, are the majority of psychoneurotic patients relieved temporarily of their phobias and anxieties by hypnotic suggestion, regardless of how severe these fears and anxieties are, or do very few neurotics respond to hypnosis, even temporarily? Why do psychiatrists disagree on the value of hypnotherapy? Is it because physicians have not made a complete study of this therapy? I know many psychiatrists who have never used this type of therapy and have never seen it used.

R. B., New York.

Answer.—An excellent book on the use of hypnosis is entitled "Hypnosis," by Shilder and Kauders. This book is published by the Nervous and Mental Disease Publishing Company, 64 W. 56th St., New York City. Many psychoneurotics are temporarily relieved of their anxiety by hypnotic suggestion, but it is much more difficult to obtain results in phobias. The success or failure of the hypnotic method depends a great deal on the

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Like Mother

We often hear the expression "like father like son", but we seldom hear people say "like mother like daughter". And one wonders why, because daughters have a way of mimicking their mothers in just about everything that they do, especially when it comes to "fixing up" before a mirror. How they love to act grownup in one of Mummie's gowns and hats, and what fun they have with Mummie's cosmetics! All of which is charming evidence of woman's inherent desire to look lovely.

This early manifestation of vanity should not be ridiculed. When little Sally begins to evince an interest in cosmetics she should be taught to understand and appreciate their value. She should be taught that good grooming is as nice as primping is naughty and she should early learn to associate cosmetics with good grooming.

Now we are not suggesting that little tots need cosmetics, although a good lubricating cream is no bad thing for tender young skins that are inclined to dryness. No, our thought is that since little girls take to cosmetics the way little ducks take to water they should learn at an early age to discriminate between primping and good grooming, and their natural vanity should be developed charmingly within the bounds of good taste.

LUZIER'S, INC., MAKERS OF FINE COSMETICS

KANSAS CITY, MO.

skill and experience of the physician using the method. Many psychiatrists do not use hypnotherapy because it is, at best, a temporary form of therapy and is usually used to relieve a distressing symptom or to investigate hysterical amnesias [loss of memory]. The results are usually temporary and must be followed by more detailed psychotherapy which attempts to give the patient an understanding of the true cause of his psychoneurosis. Many psychiatrists do not use hypnotherapy because they find other palliative or temporary methods are more effective in their hands.

Breathing in Athletics

To the Editor:—What is the correct way to breathe when running long and short races, when playing football and basketball?

M. C., Connecticut.

Answer.—The coholder of the world's record for the 40 yard dash was asked how he breathed. He looked aghast and said he did not know. He was asked to think carefully what he did just before and during the race. He replied, "When 'on your mark' is shouted, I take a breath, hold it, and breathe again when the race is over." His time for this race is 4.4 seconds. A good 100 yard man will rarely take more than one or two breaths, frequently none, in the 10 second dash. He gives no attention to breathing and rightly so. These are feats of effort and not endurance. In practice, the sprinter develops and perfects his individual form, which means that he trains his neuromuscular mechanisms to work with their greatest efficiency. To think about breathing would be a mistake, for such thoughts would interfere; all his thoughts should be directed toward the perfection of the movements propelling his body forward.

In regard to long distance running, playing football and basketball, I remember coaches arguing whether such athletes should be told to breathe through their noses rather than through their mouths. Breathing through the nose, of course, is the natural route of the respired air. But most athletes cannot obtain all the oxygen required in strenuous and prolonged effort by breathing through the nostrils alone. They should have ample oxygen, and whether they obtain it through the nose, mouth or both does not matter. Naturally, even the trained "miler" comes in gasping for air.

The only bad effect of breathing through the mouth is the likelihood of overbreathing. Overbreathing leads to the excessive blowing off of carbon dioxide, increasing the alkalinity of the blood and causing one to feel dizzy and faint. This, however, only occurs as a rule in the untrained person who has a hypersensitive respiratory center, rarely in the athlete. The untrained person can prevent it by forcing himself to breathe through the nose for a time. The breathlessness of a trained runner is due to the accumulation of carbon dioxide, lactic acid and other acid products in the blood. The acids stimulate the respiratory center, which is highly sensitive to carbon dioxide.

Some coaches instruct their athletes to hold their breath occasionally during practice running, in which manner they may decrease the natural sensitivity of the respiratory center to excess carbon dioxide. Some believe this to be of real value, and it should be of advantage in underwater swimming. Theoretically, it is difficult to conceive how it might be of advantage in the trained runner, football or basketball player where the maximum possible exchange of oxygen and carbon dioxide is desirable. There may be some athletes, however, who even when well trained tend to overbreathe, probably because they have a respiratory center that is hypersensitive. In such athletes some desensitization of the respiratory center to carbon dioxide should be helpful.

Incubator Babies

To the Editor:—Do incubator babies grow to natural sized boys and girls, or do they become midgets?

K. C., New York.

Answer.—Incubator babies, if they survive, grow to a natural size, unless they are abnormal in other ways.

In other words, that they are incubator babies does not cause them to become midgets, if they do become midgets. They are incubator babies because they were born prematurely, and it is because of their premature birth that they are small. Midgets are due to other causes than premature birth.

Memory for Numbers

To the Editor:—What operates in the mind when one visualizes a telephone number as it is in a directory? How is that mental function different from thinking a number as it is heard?

What holds a number in the mind? Is a different procedure used in the mind for each separate digit, as 2,962? How does it pass from the mind when it is forgotten?

B. O., Minnesota.

Answer.—It is generally known that one action of a person tends to be followed by or associated with another, as in certain skilled handwork, where one movement follows another so quickly that it could not possibly be planned in each instance. Learning consists of perfecting this connection so that it comes about more precisely and more rapidly. Likewise, an action of a person may be started by word (the word is an action taking the place of a thought or standing for a thought), by a thought itself or by some sensation such as hearing, seeing, feeling, tasting and smelling that may start a thought. The actual connections that occur differ with each person, because his experience (learning) makes these connections differ in strength. These connections can take place with any combinations of sensations, words, thoughts or actions. How the brain ties them together is not known.

These connections also differ in the same person with different settings of sensations, thoughts, words and actions. Similarly one number may bring up another number, and that one may bring up still another, until the whole series with which the person is familiar is completed or learned, as for example, in a telephone number. What the brain does to hold or bring out these series is not known. There is certainly no special part of the brain for each different thing, although sensations and actions are apparently interrelated.

Memory consists of finding the right key to bring out the thing to be remembered. The first notes of a song are a key to those that follow, and those are the key to still later ones. That's why it is hard to start a song in the middle. Forgetting is thus not a loss of knowledge but a lack of a key to it.

The MODERN DOCTOR (Continued from page 506)

three striking examples, have become rare diseases; measles and scarlet fever, too, can be largely prevented; and even so unruly an infection as tuberculosis is much less threatening than formerly. There still remain, however, plenty of fatal disorders about which so little is known that as yet to speak of their prevention is premature.

The intelligent layman likes the idea of preventive medicine and of seeing a doctor before he has to. Thus, the practice of medicine today is different from what it was in the times of the old-fashioned general practitioner with his frock coat and beard who dealt so largely with persons who were sick. One of the curious changes that has come about is that persons who are well now consult doctors more frequently than do persons who are ill. Of all the people in the country who visit doctors each day, at least every other one has no evidence of disease. Such persons are not hypochondriacal in the ordinary sense of the word but are perplexed by some definite problem which they suspect has a medical angle. They wish to talk to a doctor, not as a case but as one human being to another. Men and women are just as individual today as they have always been. They dislike being treated as things: They want a personal form of medical service with a sympathetic human understanding of their medical difficulties.

The medical care of patients without signs of disease has led to many important results. The healthy young married woman about to have a baby, for example, now receives intelligent medical advice during her pregnancy, with the result that having a baby is a much less serious and aging experience than it used to be. The growth of normal children has been carefully studied, as has baby hygiene. How to feed people to best advantage has been investigated, with the result that new knowledge of vitamins and so-called deficiency diseases has been opened up. Adolescence and the climacteric are more clearly understood than formerly. The beginnings of various chronic diseases are now being encountered, and possibly by recognizing them early, rational methods of prevention may be developed. The effect of unhappiness or maladjustment receives much more sympathetic understanding than it did a few years ago, and how the mind works and its reaction on the body is beginning to be comprehended. People seek medical advice if they wish to become fat or thin, which has helped to make possible the careful study of metabolism; if they wish to stop growing or to grow more rapidly, which has encouraged knowledge in certain phases of endocrinology, and if they wish to have children or wish not to, which has brought to light many curious aspects of human fertility. In fact, people who are physically well now seek medical advice for all manner of reasons, each person presenting a different conundrum. The result is that the modern doctor is becoming broader in his interests as time goes on and requires a broader educational background. Not only is he deeply interested in the recognition and cure of disease as he has always been, but he is also engrossed with psychology, with public health, with the hygiene of industry, with political economy and history as they affect medicine and with various sociologic problems which face the country today and which appear to have definite medical implications. Understanding persons who are not sick and trying to keep them well is certainly another of the important new things the modern doctor is up to. To do this successfully is fully as significant an accomplishment as to care for them when they are ill.

Progress in any profession is made through research. This, after all, is nothing more than continued diligent study in an endeavor to bring to light new facts, the discovery of which ultimately may prove to be of general usefulness. Medicine, by tradition, is a progressive occupation. Medical research must continue. It has been carried on for centuries in spite of all obstacles which superstition, ignorance or suspicion could devise.

The story of medical research is always fascinating. Important ideas come like lightning. Nobody can tell how, when or where they will strike. The idea of insulin for the treatment of diabetes struck an orthopedic surgeon working in an army hospital in France. The idea of liver for the treatment of pernicious anemia struck an internist

This clever preparation removes tough, dead cuticle without scissors, and at the same time helps to keep nails more flexible and easy to shape. It brings out their natural beauty. It is a cuticle remover, cuticle oil and stain remover, all in one.

You may not have time for long, expensive manicures, but with Manicare you simply brush your fingertips a little each day, to keep nails nice. Avoid hangnails and brittleness. 35c at drug and department stores. Trial size at 10c stores.

ACCEPTED FOR ADVERTISING IN PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION

Courtenay's Manicare

YOUR TEETH

OUR FOOD AND OUR TEETH, by Percy R. Howe. 4 pages. **5 cents.**

THE CARE OF THE TEETH, by W. M. Gardner. Causes and prevention of dental decay and pyorrhea; dentifrices and mouth washes; brushing-with-pressure method; cooperation with dentist. 27 pages. **15 cents.**

TAKING THE CHILD TO THE DENTIST, by William M. Gardner. 4 pages. **5 cents.**

WHAT THE MOUTH CAN TELL, by Louis Cohn. 4 pages. **5 cents.**

DENTAL NOSTRUMS AND THE PUBLIC HEALTH, by Samuel M. Garden and Eleanore B. Dufour. A reprint from Hygeia of three articles on the promotion of dental nostrums and dentifrices. 32 pages. **10 cents.**

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street Chicago, Illinois

in Boston through some experimental work going on in Rochester, N. Y. The idea of sulfanilamide occurred to an industrial chemist in Germany who happened on a dye with the property of preventing the growth of bacteria in the test tube. This observation raised the question whether a dye might not be developed which would prevent the growth of bacteria in the human body.

It is one thing to have an idea and another to carry it through. Medical research which is significant, by necessity, grows more complicated as time goes on and as more is known. It continually requires better equipment, greater cooperation and always infinitely more learning. To develop insulin, for example, required the combined efforts of a group of surgeons, physiologists and biologic chemists. To use liver most effectively in the treatment af pernicious anemia required not only imaginative clinicians but also equally imaginative physical chemists. To synthesize sulfanilamide and study its effectiveness required chemists, bacteriologists and pharmacologists. Not one of these discoveries could have been perfected by one individual alone or without adequate laboratory facilities.

It is easy to conceive of many medical problems which are unlikely to be solved except by combinations of investigators working as a team, attacking together from many different angles some elusive aspect of disease. On the other hand, it is difficult to know how opportunities for combined research of this type can best be established. Obviously, vast resources are needed; laboratories, libraries, hospitals especially equipped for clinical investigation where patients may be studied and, above all, men with brains are necessary. The doctor with ability to do research is a rare individual. But he is so essential to the progress of medicine that he must be supplied with equipment for his voyages of exploration and discovery.

A doctor must discriminate between what is true and what is false in medical research, and between what is accomplished in an honest endeavor to bring to light new facts and what is done for the purpose of self advertisement. A few years ago the potential danger of overemphasis on the importance of medical research became apparent in a curious way. For out of research there grew the medical specialist.

To keep pace with growth in medical knowledge and to discover and apply safely to patients new concepts of diagnosis and treatment, physicians interested in certain isolated fields of medical endeavor began to explore these fields to the exclusion of all others. In this manner, as opportunities arose, those with the necessary ability began to discover new facts about disease which proved of great practical value. This was as it should be. The first specialists were primarily investigators.

Presently, however, at least so far as practice was concerned, the possible disadvantages of what was going on began to appear. Scientific medicine and clinical investigation became too fashionable and too lucrative. Patients began to feel they were getting imperfect treatment if only a plain doctor took care of them. They wished to be seen by specialists and, in fact, even seemed willing to pay for this privilege. With people asking for this new attention, the demand was quickly met. There appeared in large numbers self-styled specialists who were not particularly competent and certainly were unable to claim any outstanding knowledge. This way of doing things proved no asset to the general reputation of the medical profession. Finally, in order to clarify the situation, doctors themselves have attempted to define what a specialist is and to describe in a general way what sort of training and experience is necessary before a physician or surgeon should be rightfully acknowledged as a specialist in any field.

Today, to be accepted by his brethren as a specialist, a doctor must have graduated from a good medical school and have served a good internship. On this foundation he must build by spending at least three years in obtaining intensive training in whatever specialty he selects. After a period of practice, with his work limited to his specialty, he may be examined by a board comprised of unquestioned leaders in his field, and, if he passes the board's examination, he may then be awarded a certificate which states that he is a qualified specialist in whatever field he has chosen.

Many doctors believe that the importance of specializing has been overstressed. On the other hand, without doubt, there are aspects of medicine, and particularly of surgery, which in the interest of the patient, no novice must tackle; they require highly specialized methods of diagnosis and highly specialized forms of treatment.

At present, several distinct specialties are recognized. These include medicine, surgery, pediatrics, obstetrics and gynecology, ophthalmology, dermatology and syphilology, otolaryngology, neurology and psychiatry, radiology and pathology. Whether or not the present method of qualifying specialists in these branches of medicine is more than a brave experiment is uncertain. But at least it shows the strong sense of responsibility which the medical profession feels, on the one hand, to safeguard and promote decent medical research and, on the other hand, to protect the public as far as possible against all forms of medical sabotage.

In spite of changes in the way he practices and in the type of work he does, the modern doctor remains at heart the same simple person a doctor has always been. All he is up to is this: He is in the practice of medicine because he likes people, because he wishes to learn as much about them and their diseases as is possible in order to take better care of them when they fall ill, or because he earnestly desires the advancement of medical knowledge in order to minimize the future hardships of the illnesses of the race.

The practice of medicine, like everything else, becomes more rather than less complicated as time goes on. The modern doctor recognizes this fact and does what he can to avoid the pitfalls of temporarily popular fads or fancies. He believes that the process of medical education is growing better, so that better trained doctors are entering the profession and that more is known of illness each year so that the care of people who need medical help is steadily improving. He tries to be progressive and liberal in his attitude of mind but at the same time to retain his sense of proportion and conservatism, a point of view which history tells him is the only sound basis of real progress. He does not wish to have medicine deviate too far or too quickly from the path which it has followed with

reasonable success for many centuries. For he respects his work. He works honestly and unselfishly, so that the patient who seeks his advice may receive the best of what is known. On last analysis, the faith of his patients in his judgment is his chief reward. He believes that if the American people desire medical service of this character to continue, it will continue. Otherwise, he fears that medicine will be regimented and that the friendly personal relationship between doctor and patient which, since time immemorial, has characterized the art of medicine, may in large measure disappear. This he dreads, because he believes that the ideals which led him to become a doctor are founded on a fine tradition which is elusive, time honored and well worn, and that without the traditionally personal relationship between doctor and patient the practice of medicine may degenerate from an unselfish profession into a trade.

Shoes Built on Standard Lasts Are Inadequate

Declaring that the shoes constructed on the standard lasts used in this country do not meet the requirements of the so-called normal or symptomless foot of the average person, Frank R. Ober, Boston, says in *The Journal* of the American Medical Association that properly constructed shoes can be made which will not cost the manufacturer any more than the shoes he now is making.

The problem of properly fitted shoes is an individual one, he says, pointing out that feet do not conform to standard lasts even though there are variations in sizes and shapes of shoes. It would be impractical from an economic standpoint to embark on an ideal program that would meet all the needs of individuals; however, much can be done to improve materially conditions as they now exist without extra cost to the manufacturer or the consumer, he contends.

Discussing the requirements for a satisfactory shoe to be used on a normal or symptomless foot, the author mentions adequate length and width of the shoe, a heel inside the shoe that is not too wide to hold the heel of the foot snugly both at the sides and behind, and sufficient room over the instep, especially for the medium to highly arched foot. He also says that the height of heels must meet individual requirements and cannot be standardized. The shank of the shoe should not be made of steel but of a more plastic material so that it can be raised or lowered and will not break when bent or when under a load.

Effect of Needle Puncture in Injection Treatment of Arthritis

The psychologic effect of the needle puncture is apparently largely responsible for improvement of arthritis after injection treatment, regardless of the substance used, Nathan Sidel and Maurice I. Abrams, Boston, conclude in *The Journal* of the American Medical Association. They report a slightly greater improvement in patients given a solution of common salt than in those treated by streptococcus vaccine, sometimes considered a "specific" treatment for arthritis. The salt solution was given merely as a check, for the small amounts administered could hardly have produced a specific effect.

In addition to the psychologic factor, the authors point out, the tendency to natural remission in chronic arthritis helps to explain the high percentage of improvement.

SAFETY SONNETS

BASEBALL TODAY
GATE-CRASHERS AT BALL GAMES GET MANY A BRUISE.
DAILY NEWS
CROSSING CRASH KILLS 4!
BUT RAILROAD GATE-CRASHERS GET HEADLINES IN NEWS!

—National Safety Council

FOR BATHING *Beauty*
specify "WATERPROOF"
COVERMARK

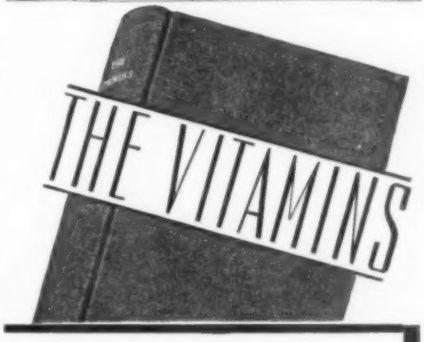
This summer you can be a flawless bathing beauty from head to toe, thanks to Waterproof Covermark. Completely conceals freckles, leucoderma, birthmarks, bruises, varicose veins, and all other discolorations on face, legs, arms, hands, throat and back.

CONCEALS ALL BLEMISHES

WATERPROOF
WIND-PROOF
SUN-PROOF

Waterproof Covermark $1.25 at Dept. and Drug Stores. Three shades: light, medium and dark.

LYDIA O'LEARY, INC., 551 FIFTH AVENUE, N. Y. C.



A 637-Page Summary of Present Knowledge

More than thirty outstanding authorities in the fields of medicine, pediatrics, chemistry, biology and nutrition have given their best thought to the compilation of this book. Being technical, it obviously is not "for light reading", but will prove of interest and value to dietitians, nurses, teachers of home economics and health, and all scientific-minded persons who take their vitamins seriously.

PARTIAL TABLE OF CONTENTS

Vitamin A
Chemistry, Physiology, Pathology and Therapeutics; Methods of Assay and Food Sources; Requirements.

Vitamin B
Complex; Thiamin (Vitamin B_1); Riboflavin—Physiology, Pathology; Pellagra.

Vitamin C
Deficiency; Dietary Sources; Requirements; Pharmacology and Therapeutics.

Vitamin D
Requirement; Preparations; Ultraviolet Therapy; Physical and Clinical Aspects.

Vitamin E and Other Factors

637 pages, 8½ x 5½ inches. Red imitation leather binding. Price $1.50

AMERICAN MEDICAL ASSOCIATION
535 N. Dearborn St., Dept. V. Chicago

BOOKS ON HEALTH

The Poison Trail

By William F. Boos, M.D. Cloth. Price, $3. Pp. 380. Boston: Hale, Cushman & Flint, 1939.

Here is an autobiography that is at once interesting and enlightening. The author is a toxicologist and gives highlights from many of the cases he has solved—often cases of murder! Many of these murders were widely publicized in the press at the time; but as to the others, this is the first public light cast on them. By reading this book, one would also learn to testify intelligently in court, for the author's experience has been wide in this phase of his work, and he imparts this information willingly.

The cases he reports emphasize how human nature has remained the same fundamentally the last fifty years. They also are of value as documents of the times they portray. All are extremely interesting and make good reading.

SIBYL WINSER JOHNSTON.

Mental Hygiene in New Jersey Schools

By Charles R. Foster Jr. Paper. Price, $1. Pp. 104. New Brunswick, N. J.: Rutgers University Press, 1939.

The writer of this survey investigated mental hygiene conditions throughout the state of New Jersey in a special effort to see how many of the various types of so-called Mental Hygiene procedures were actually in vogue in dealing with New Jersey juveniles. The book can essentially be divided into three parts. One, made up of the second chapter, describes in considerable detail the features used in carrying out mental hygiene work in schools in various towns. Even in Jersey City and Newark he found some services lacking, but in the former city there is a special service division which provides a great many procedures, such as recreation, care of crippled children, psychologic tests and psychiatric examination. In Newark there is a a special bureau which provides for examination of the school children, but because of various community problems it is hard to evaluate how much this service ramifies throughout the community. Suffice it to say that the service rendered in the various communities runs the gamut from almost nothing to fairly good beginnings in these two cities.

Community "X" is interesting in that in this unnamed community there is a high school with two services, two principals, two groups of classes under the same roof, which of course, causes considerable friction and is an example of bad mental hygiene right in the school itself. How far the mental hygiene services are carried out through the state is demonstrated in a number of paragraphs in the third chapter, which constitutes the second large division of the book. Many procedures, such as investigating children's background and providing special help to the scholastically backward child, are fairly well supplied. There are few services that are not rendered in over 50 per cent of the school systems studied. Some of the particular features which might be of interest to physicians are "selecting teachers with mental hygiene in mind," "standards for training school psychologists and other workers in the field." Fourteen other considerations are dealt with. In the appendices the author presents a list of the communities in New Jersey cooperating in this study, a bibliography and an extremely important table showing the agencies providing mental hygiene clinic services throughout the state. When one peruses these, one notices that most of the real mental hygiene services are provided by the New Jersey state hospitals. This little volume is interesting; it is one which is quite sound and

Courtesy The New Yorker

which could well be perused by teachers and physicians who are interested in those phases of medicine that have to do with the school child. Studies such as this should raise the standards of mental hygiene practice in the schools, and it is obvious from the present study that these standards need to be raised considerably.

LOWELL S. SELLING, M.D.

Lissen, Sadie

By Florence Brewster Wikingsson. Paper. Price, 35 cents. Pp. 48. Illustrated. Upper Darby, Pa.: The Sadimin Company, 1939.

Min, a scrub-woman in a hospital, keeps her friend Sadie posted as to what is going on therein. What with courting one of the patients, helping to catch a fugitive criminal and salvaging all unused pills and wet medicine for her own use later, Min herself has an interesting life and a fascinating tale to tell. It would make a perfect remembrance for your sick aunt in the hospital!

S. W. J.

Hygiene and Health

By William Ralph LaPorte. Paper. Price, $1.25. Pp. 149. Los Angeles, Calif: University of Southern California, 1939.

This is a manual for health teachers, said to be adaptable to both senior high school and junior college, and to boys' and girls' classes alike. It follows the usual formula for presenting health problems through reading, projects, reviews and class work, though not in the conventional order nor according to the usual textbook style. Its approach is functional, dealing with such topics (in the order named) as health problems and objectives, physical activity and bodily mechanics, immunization and disease prevention, protecting the special senses, care of the skin and hair, food, elimination and nutrition, respiratory health, circulatory health, glands of internal secretion, nervous and mental health, alcohol and other narcotics, heredity, eugenics and race improvement, sex and reproduction, selection of mates, marriage and parenthood, first aid and emergency treatment. Self-rating scales on physical health, mental-emotional health, social health and physical achievement are included and emphasized by the author as unique features of the manual. The effectiveness and safety of such self-ratings depends, of course, on the wisdom with which they are used and the objectiveness of attitude which can be achieved by the self evaluator.

The section on vitamins is not well considered, including such statements as that vitamin F promotes growth. There is failure to distinguish, in the case of vitamin E, between experimental evidence in rats and its application to human nutrition. It names vitamin G as the pellagra-preventive principle, making no reference to nicotinic acid. On the whole, however, this is a useful teaching device.

W. W. BAUER, M.D.

The Party Book

By Mary J. Breen. Price, $2.50. Pp. 354. Illustrated. New York: A. S. Barnes & Co., 1939.

Here is a good guide for games; but in addition to such directions as are necessary for these, this book gives recipes and menus for appropriate seasons and party spirits. The volume contains programs for young and old, for special occasions and holidays, for novelty dances with costumes and atmospheric decorations, for banquets, picnics and outdoor parties and games and stunts for large or small informal gatherings. The author was formerly on the staff of the National Recreation Association.

S. W. J.

Billy Forget-Me-Not

By Maude M. Tanner, D.M.D. Illustrated. Price, $1. Pp. 55. Chicago: Follett Publishing Company, 1939.

Billy Forget-Me-Not was a tooth which appeared first on the occasion of Buddy's sixth birthday—his sixth year molar. The action of the story centers around learning Billy's identity. The book is intended for an audience aged 5 to 8 years.

S. W. J.

NOTICE

Books reviewed in this section should be ordered from booksellers or direct from the publishers. They may not be secured through HYGEIA or the American Medical Association, unless published by this organization. The following list contains the complete addresses where the publishers mentioned in these reviews may be reached:

A. S. Barnes & Co., 67 W. 44th St., New York City.

D. W. Follett Publishing Company, 1257 S. Wabash Ave., Chicago.

Hale, Cushman & Flint, 116 Newbury St., Boston.

The Sadimin Company, 204 Copley Road, Upper Darby, Pa.

University of Southern California, University Park, Los Angeles, Calif.

★ *Don't Be Blue!* GET

"Lissen, Sadie"

By Florence Brewster Wikingsson

The book that makes you laugh uproariously at hospitals, doctors, nurses, etc. "You'll read it with much pleasure."—Walter Huston, stage and screen star. *"Send instead of flowers"*

Booksellers, gift shops, greeting card counters, or THE SADIMIN CO., Upper Darby, Pa. 35c

CAMERA FANS WIN this PACKARD touring sedan!

. . . OR one of the OTHER 271 PRIZES offered in the POPULAR PHOTOGRAPHY

$5,000 PHOTO CONTEST

You'll find the complete list of awards together with the official contest rules and entry blank on page 52 of the June POPULAR PHOTOGRAPHY. Get your copy of this important issue today! But don't delay — enter this giant picture contest now and make your camera pay dividends!

COMPLETE DETAILS IN THE JUNE

Popular Photography

ON SALE AT ALL NEWSSTANDS

COSMETICS AND ALLIED PREPARATIONS

Facts concerning preparations for the skin and for the hair, deodorants, depilatories, etc., most of which have appeared in the Bureau of Investigation department of THE JOURNAL A. M. A. Miscellaneous articles from HYGEIA. 60 pages. Price 15 cents.

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street - Chicago, Ill.

UNCONQUERED ENEMY

By BORIS SOKOLOFF, M.D., Sc.D.

The story of the fight against cancer on a thousand fronts. Dr. Sokoloff, who has spent years in cancer research at the Rockefeller Institute, tells what the disease really is, gives its history, and shows what is being done in hospitals and laboratories. Doctors can allay the fears and ease the minds of patients who think they have cancer by having them read this enlightening book. Only $1.75. Order on coupon below.

The GREYSTONE PRESS, 40 E. 49th St., New York

Please send me ——— copies of UNCONQUERED ENEMY by Dr. Boris Sokoloff at $1.75 per copy for which I enclose check or money order.

Name.....

Address.....

City..... State.....

CORRECTING SPEECH DEFECTS

(Continued from page 509)

A certain number of individuals in this group are prone to disorganization. They are chronic hesitators, manifesting their disorganization in psychomotor performance. Under the slightest emotional stress they demonstrate nonrhythmic or hesitant motor activity, which in fact is a form of stuttering. These disorganized individuals comprise the group which I term the Stutter Type. But that does not mean that they necessarily stutter in their speech. Many of them demonstrate their stuttering in other ways: in sports or in playing musical instruments, for instance. Only a certain percentage of them demonstrate their hesitancy in speech, but it is in this group that we are particularly interested.

Like all stutter-type individuals, the child who demonstrates his psychomotor disorganization in speech shows marked evidence of an inherited neuropathic diathesis, or nervous constitution, and it is usually possible to trace a definite history of emotional instability in his family. This inherited, or inborn, liability to nervous disturbance is the underlying or primary cause of stuttering, but it is not in itself enough to cause a speech disturbance in the child without a more immediate or precipitating cause. The precipitating cause may be an accident, a shock or a radical change of environment such as occurs when the child begins school life and breaks away from the protection of the family. It may even be the accumulated impacts of an oppositional home environment, that is, an early home life charged with parental neuroticism.

But whatever the precipitating cause, it so weakens the child's power of physical and psychic resistance that his inherently unstable organism is thrown into disorganization. In the course of time, the speech function, which is one of the most finely coordinated of the psychomotor functions and hence particularly prone to be thrown out of order, becomes affected by the general disorgnization, and the child begins to stutter. Possessing, as he does, a relatively high potentiality for the spread of emotional tone, the child unconsciously invests his speech disturbance with emotionalism which in turn gives rise to further speech failures. As these failures are repeated, an anxiety neurosis develops which eventually warns the child's whole personality. Timidity and fear become the dominant factors in his makeup, retarding his social adjustments and causing many of his personality traits to remain on an infantile, self centered level.

It may thus be seen that in the case of stuttering, the problem is not localized, and therapy therefore cannot be localized but must be directed toward the reconstruction of the personality as a whole. This requires a far reaching therapeutic regimen that can be carried out only under special conditions.

At a clinic of a medical-social nature, the stutterer undergoes a composite medical, psychiatric, psychologic, reeducational and social treatment carried out in a specially created environment, which approximates as closely as possible the environment of the outside world without its oppositional and negative impacts. Through group activities and "open door" psychiatry, the stutterer is completely reorganized so that he gains emotional control and physical coordination. In the course of time, his egocentricity [self centeredness] is replaced by objectivity, and he is able to bridge the gap psychologically between the special environment and the outer medium. In other words, he is able to withstand the impacts of the outside world and to act (and speak) in a rhythmic, organized and confident manner in all situations.

From the foregoing, it should be evident that stuttering is properly a medical-psychiatric specialty; but unfortunately, facilities for treating it as such are extremely limited at the present time. Therefore, the responsibility for the treatment of the stuttering child falls mainly on the speech teacher and the parent; and while they cannot give the child the composite therapy described, they can be of definite aid to him.

They must realize, however, that stuttering is not just a bad speech habit that can be overcome by means of speech exercises. It is a cry for help and must be treated as such. It is a symptom of basic nervous and emotional turmoil, a turmoil which is the result of the stutterer's inability to control emotional stimuli that arise in the more primitive part of the brain.

The teacher and parent must remember that the child who stutters comes into the world less ably equipped to cope with life than his fellows. I do not mean that he is intellectually inferior; he is not. But his psychomotor efficiency is on a lower level. For instance, we have found that children who stutter demonstrate a general lack of coordination in gross and fine muscle movements. Other investigators have found the same thing. Only recently, a study was made of the developmental history of 500 stuttering children compared with 500 normal children, and it was found that the children who stuttered were definitely retarded in acquiring motor skills. They are in general somewhat more awkward, and their movements are less graceful.

Therefore, it is a mistake to attempt to make such a child conform to the regulation environment. The teacher or parent must not set up arbitrary standards for him on the basis of what the normal child can be expected to accomplish, but rather she should credit such a child according to his individual capacities. Allowances should always be made for him; and if repressions are necessary, they should be "personalized" repressions. Ordinary measures always produce extraordinary effects on the stutter-type child.

In other words, the teacher and parent must attempt to fit the environment to the child rather than the child to the environment. On the physical side, the process of fitting the environment to the child begins by having him do everything slowly and easily and by instituting a regimen of rest and relaxation. While such a child may seem to have a great deal of surplus energy, it is emotional in character. The exaggerated and irrelevant motor activity which may be observed in most of these children is simply a release of tensions which arise from their inner emotional upheavals. Frequent periods of relaxation decrease the strain on the organism, quiet the nervous system and relieve inner tensions.

The teacher and the mother must also try to develop the child's sense of coordination and rhythm. This

can be done by means of rhythmic exercises and by encouraging the child to play simple games which require accuracy of movement and muscular coordination.

I have said little about speech, because that is fundamentally the least important aspect in the treatment of the child who stutters. As I have already pointed out, he is not a speech defective in the true sense of the word. While he should be encouraged to talk, he should not be *made* to do so. This is simply another way of saying that parent and teacher should concentrate on the child's abilities and not on his disabilities. In other words, they should build up his self confidence instead of breaking it down by concentrating on his "weakest link."

Of course, *favorable* speech experiences help to build up such a child's self confidence, and both mother and teacher should make such favorable experiences possible by eliminating all forms of tension. In other words, they must give the child an "easy going" medium, which will counteract the excitatory impulses that throw him into disorganization.

At school, the teacher must try to make the other children understand and become conscious of her objective and thus create a sympathetic classroom environment for the child who stutters. In this connection, the teacher will find the group approach—that is, treating several of these stuttering children together—more productive of good results than individual therapy. The contagion of group response helps to overcome self consciousness and resistance to adjustive suggestion.

I might point out here, however, that often the problem of treating the child who stutters is more a case of endeavoring to lessen negative environmental pressures in the home than of treating the child directly. Family quarrels in the presence of the child should be avoided, and "temperamental" members of the family should curb their nervous and excitable tendencies and their emotional outbursts. Most important of all, the child should never be punished when he stutters; neither should he be ridiculed or made to feel that he is "queer." The one is nothing less than brutality; the other, mental cruelty.

And, whether the child suffers from stuttering or from some other voice or speech disorder, he must receive sympathy and understanding at all times. All these children are variations from the so-called normal, and our regimented world is not kind to variants. The speech teacher or parent must remember this. She must remember also that to the child, the home and the classroom represent the world at large, and on his experiences in this miniature "world" will depend to a large extent his future happiness and the success of his future adjustments in life.

DRUG LABELS

All products containing the drug aminopyrine should have that name plainly written on the label rather than its complex chemical name, Oscar Berhausen, Cincinnati, advocates in *The Journal* of the American Medical Association in reporting a death from the use of a preparation called causalin for arthritis. He says that many physicians are not familiar with the complex chemical name for aminopyrine, a drug which may cause a deficiency of white blood corpuscles. In the case reported by him such deficiency resulted in the death of the patient who had taken three capsules of causalin a day over a period of a month. Other deaths from causalin have been reported, and the drug has been the subject of condemnatory reports by the Council on Pharmacy and Chemistry of the Association.

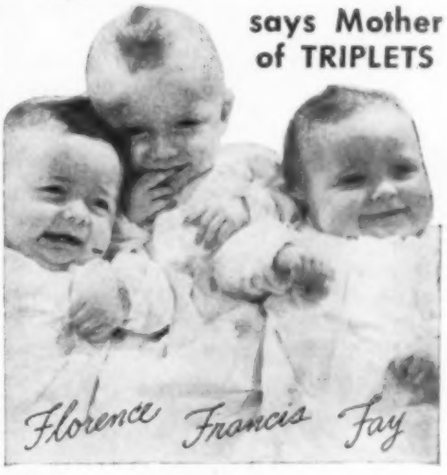
SKIN PROTECTION

The skin of most areas of the body has a self protecting mechanism which quickly destroys bacteria, Carroll W. Stuart, Chicago, declares in the *West Virginia Medical Journal* in summarizing the investigations of two workers of his laboratory.

The specific characteristics of this mechanism have not yet been learned, he says, but "when strains of bacteria are placed on the normal skin, there is something in the surface epithelium which destroys 90 per cent of the organisms in twenty minutes and the rest in fifteen minutes more.

"There are, however, four areas over the body where this process does not take place. They are: around the fingernail beds, the toenail beds, the zone of contact of the lips (not the vermilion margin) and the gum margins."

"Extra thankful for NEW QUICK LUX-" says Mother of TRIPLETS



"It's so **Fast**—so **Thrifty**—so **Safe!**"

"The triplets have such sensitive skins," says Mrs. Francis Bardol, "I have to use gentle care for everything they wear. Strong soaps or rubbing with cake soap might leave woolens harsh and scratchy. That's why I use new, quick Lux for their clothes. I know it's mild and gentle.

"It suds so *fast*, too, gives plenty of rich suds. And it goes further—that makes it extra thrifty."

• • •

Yes, new, quick Lux is FASTER! In water *as cool as your hand,* it dissolves 3 TIMES AS FAST as any of 10 other leading soaps tested. GOES FURTHER—gives MORE suds ounce for ounce even in hard water than any of these other soaps. So GENTLE, too. Contains no harmful alkali. Safe for everything safe in water alone!

In the same familiar box—*at no extra cost to you!*

DIAPER DATA

By WILLIAM I. FISHBEIN

THE infant sarong is no longer the simple device it used to be. Diapers have changed in size, shape and material and bring more comfort and safety to the baby. Unquestionably, the diaper is one of the most important articles of clothing during the infant's first year!

The infant's skin is easily irritated. Unless the moisture in the diaper evaporates promptly, maceration [softening] of the skin may occur. It is important also that the diaper material be absorbent.

For many years, diapers were made chiefly of flannel or of birdseye cotton. These materials, while satisfactory in many respects, have certain drawbacks.

Recently, an improvement in diaper manufacture has occurred. A new type of gauzelike material has been suggested, which seems to be more absorbent than diapers previously employed. Furthermore, they are easier to launder.

The diaper for maximum utility must not only be made of light, absorbent, easily laundered material but must also be of the right size. If the diaper is too small, it necessarily will cause binding and chafing. If it is large and bulky, it will be uncomfortable and cause rubbing and irritation of the skin.

As the baby grows, the size of the diaper may well be changed. Early in life, perhaps a diaper 24 x 24 or 24 x 30 inches, may be entirely satisfactory. However, this will depend somewhat on the size of the newborn infant.

After the baby is 3 to 5 months of age, a larger diaper, perhaps 20 x 40 inches in size, may be more comfortable. The size of the diaper varies with the method of folding.

It seems impossible to set down any one standard size diaper which may be expected to prove satisfactory for all infants. Hence, in planning the layette, the wise thing to do is at first to buy six to twelve diapers 24 inches square. Then, after the infant is born and his weight and size determined, additional diapers may be purchased, the size depending on the infant's weight and the method of folding adopted.

As a rule, eighteen diapers, 24 inches square, will prove sufficient for the first two or three months of life. After that time, eighteen diapers, 20 x 40 inches or 30 inches square, depending on the method of folding used, should prove sufficient. Of course, the number of diapers necessary depends on how frequently they are laundered. If laundering is done only once a week, which will prove quite unsatisfactory in most instances, a greater number of diapers will be needed.

The diapers should be laundered daily if possible. The soiled diapers should be put immediately into a covered pail containing sufficient water to cover them. After washing with mild soap and warm water, the diapers should be boiled, then rinsed several times to make sure that all the soap is removed from them and hung out to dry in the sunshine, if possible. If soap remains in the diaper, irritation of the baby's skin may occur from contact with the diapers.

As a rule, there is no need to iron the diapers. After drying, they need only to be smoothed out and folded.

In certain communities, diaper laundries have been established. These furnish a supply of sterilized

H. Armstrong Roberts

The comfort of the baby depends on how the diaper is folded and put on.

Young mothers agree . . . .

BABIES TAKE TO CLAPP'S!

It's a problem for young mothers—finding a baby food which meets the high standards of doctors and babies. For if taste and texture aren't just right, babies can kick up quite a fuss.

Now, of course, no line of baby foods is sure to please *all* babies, with all varieties. But *Clapp-fed* babies, generally speaking, are excellent eaters. And the enthusiastic testimony of many doctors and mothers is—"Babies take to Clapp's!"

Clapp's vegetables have a specially fine flavor. They're garden-fresh when canned...retain vitamins and minerals in high degree . . . and are lightly salted in accordance with doctors' directions.

The right texture, too. Clapp's Strained Foods are not too thick for a baby's tongue. Yet not so thin he doesn't learn to eat. And when the transition from Strained to Chopped Foods must be made, Clapp-fed babies take it easily in their stride. Clapp's Chopped Foods have the same good flavors, and they're *uniformly* coarser in texture—never any lumps or stems.

• • •

★ **The Clapp Company, first to make Strained and Chopped Baby Foods commercially, is the only organization of national importance that specializes exclusively in this field.**

Clapp's Program of Graded Infant Feeding

17 VARIETIES STRAINED FOODS
FOR YOUNG BABIES

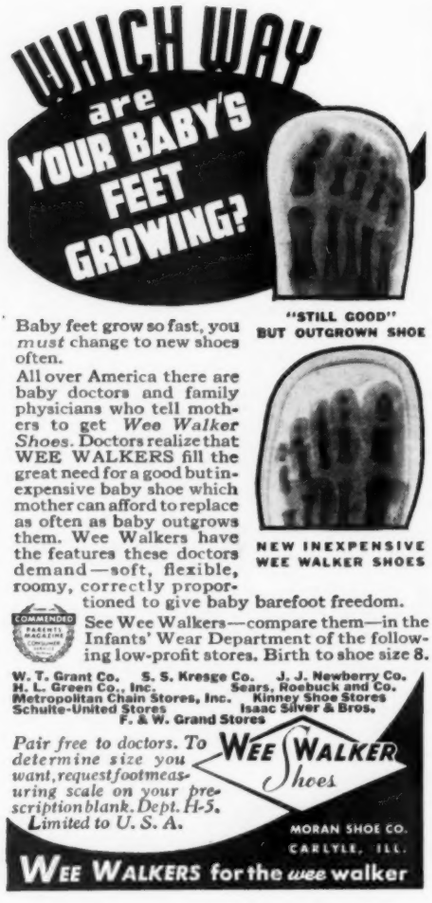
Soups—Vegetable Soup • Beef Broth • Liver Soup • Unstrained Baby Soup • Vegetables with Beef • **Vegetables**—Asparagus Spinach • Peas • Beets • Carrots • Green Beans • Mixed Greens **Fruits**—Apricots • Prunes • Applesauce • Pears-and-Peaches **Cereal**—Baby Cereal.

12 VARIETIES CHOPPED FOODS
FOR TODDLERS

Soup—Vegetable Soup • **Combination Dishes**—Vegetables with Beef Vegetables with Lamb • Vegetables with Liver • **Vegetables**—Carrots • Spinach • Beets • Green Beans • Mixed Greens • **Fruits**—Applesauce • Prunes • **Dessert**—Pineapple Rice with Raisins.

Clapp's Baby Foods

OKAYED BY DOCTORS AND BABIES


WHICH WAY are YOUR BABY'S FEET GROWING?
"STILL GOOD" BUT OUTGROWN SHOE
NEW INEXPENSIVE WEE WALKER SHOES
Baby feet grow so fast, you must change to new shoes often.
All over America there are baby doctors and family physicians who tell mothers to get Wee Walker Shoes. Doctors realize that WEE WALKERS fill the great need for a good but inexpensive baby shoe which mother can afford to replace as often as baby outgrows them. Wee Walkers have the features these doctors demand—soft, flexible, roomy, correctly proportioned to give baby barefoot freedom.
See Wee Walkers—compare them—in the Infants' Wear Department of the following low-profit stores. Birth to shoe size 8.
W. T. Grant Co. S. S. Kresge Co. J. J. Newberry Co.
H. L. Green Co., Inc. Sears, Roebuck and Co.
Metropolitan Chain Stores, Inc. Kinney Shoe Stores
Schulte-United Stores Isaac Silver & Bros.
F. & W. Grand Stores
Pair free to doctors. To determine size you want, request footmeasuring scale on your prescription blank. Dept. H-5. Limited to U. S. A.
WEE WALKER Shoes
MORAN SHOE CO.
CARLYLE, ILL.
WEE WALKERS for the wee walker

Discourage
THUMB SUCKING
NAIL BITING
THUM* is recommended for children 2 yrs. or over. Only 50c a bottle, at all druggists, or write for literature.
NUM SPECIALTY CO.
4614 Fifth Ave. Pittsburgh, Pa.
*Containing extract of capsicum (2.34%) in a base composed of acetone nail lacquer and isopropyl alcohol.
H 6-40
THUM

diapers two to four times a week, as desired. The clean garments are delivered in an airtight, sealed container, which serves as a receptacle for the soiled ones. This service has become popular, because it has relieved the mothers of the tedious task of washing and boiling diapers. At the same time, the infant has an abundant supply of soft, sterile diapers constantly at hand.

The comfort of the baby depends on how the diaper is folded and put on. Until several decades ago, the three-cornered method of folding was the only type utilized. At present, the oblong fold seems to be more commonly used.

A diaper must be folded and put on so that it does not limit the movement of the child's legs or cause undue pressure on his skin. It must contain enough layers of folded thicknesses to give protection and to bring about prompt absorption of moisture, yet not too many for comfort. Furthermore, the method of folding must be simple, since mothers will not use a complicated type.

From the standpoint of comfort and ease of putting on the diaper, the oblong method of folding seems to be most satisfactory. A 20 x 40 inch diaper is suggested, and when folded, it should make a diaper about 12 inches wide.

One good method is to bring one end of the diaper over about 8 inches from the other. This end is then folded back 2 to 3 inches from the folded edge, which will make a panel of three thicknesses of diaper at the lower end. The upper end is then brought over to the outside folded edge, which will make the diaper four layers in thickness in the center section. This method of folding has the advantages of being easily adaptable for any size baby and places the extra material in the center where it is required.

In putting on the diaper, it is usually pinned with two safety pins on each side. Some diapers have been manufactured with tie strings, doing away with the need for safety pins. The tie-string diaper, however, is not as satisfactorily adjusted in size to the baby's needs as is the type which is pinned. On the other hand, it obviates the danger of the baby being stuck with a safety pin or perhaps swallowing a pin carelessly left where the infant may get hold of it.

Paper diapers to be placed inside the regular diapers have been prepared of extra heavy linen-weave paper, about 20 inches square. The paper, if used, must be of such quality that it causes no chafing and irritation of the baby's skin. The chief utility perhaps is in saving laundering and for convenience during traveling.

Paper diapers are usually not adequate to absorb the urine and hence do not reduce to any great extent the number of cloth diapers required.

A triangular-shaped piece of rubber material to put on over the cloth diaper often aids in preventing soiling of sheets, bed clothing and the baby's outer clothing. Such rubber diapers do not prevent evaporation of moisture to any great degree and so may usually be satisfactorily employed.

The type of rubber pants which completely cover the diaper and which have elastic bands at the leg openings are not, as a rule, advisable. These pants prevent evaporation of moisture from the diaper and may lead to irritation of the skin, if worn for any considerable period.

Infants sometimes produce a skin eruption limited to that area of the skin covered by the diaper. The skin becomes sore, red and inflamed. The exact cause for this type of rash is not known. It is thought by some to be due to the formation of ammonia on the diapers as a result of the action of certain bacteria on components of the urine. Prevention of this type of rash, it is believed, may be brought about by carefully boiling the diapers and soaking them in a boric acid solution just before drying.

There are other physicians who are of the opinion that the irritating qualities of the urine occur because of an excessive protein intake. Protection of the skin with a simple ointment, careful boiling and laundering of the diapers and prompt changing when the diapers are soiled or wet usually allow prompt healing of the skin condition.

The Editor of HYGEIA *announces that hereafter contributors will be paid for their manuscripts on date of their acceptance, instead of on publication.*

MEDICAL CARE for ALL (Continued from page 496)

was informed that he could probably pay the regular fees, and he left grinning. He could be heard mumbling, "No dice."

A widow, who is the sole support for two growing children, works as a cook in a school cafeteria. She had been steadily going downhill until her condition was such that she soon would be unable to work. She heard of the Medical Service Bureau and came to see the supervisor. She was referred to a physician for examination, and it was discovered she had diabetes. A prescribed course of treatment was laid out by the physician, and she paid $1 for each office call. Today she has improved decidedly.

Some interesting and revealing material is found when the activities of the Medical Service Bureau are studied from various approaches. According to figures recently compiled, approximately 16 per cent of the population in Sedgwick county was receiving public assistance or security wages from the Works Progress Administration. With this in mind, let us look at some of the facts found in the bureau's statistics.

Sixty per cent of the persons seeking medical aid through the bureau's facilities depend on WPA wages of approximately $50 a month. The average family has 4.3 members. Considering the entire clientele the average monthly income is between $55 and $60 a month. The average family pays $10.90 a month for rent, and 12 per cent of the clients own their own homes or are buying them on a pay-as-rent basis.

A question certain to arise at this point is: Can these people pay, or do they pay, for their medical service? It was a question which the bureau itself wondered. Twice during the three years the bureau has been operating, a study of this question was made of twenty-five cases taken at random. In each instance, to the surprise of all concerned, it was found that 70 per cent had paid their medical bill or were making satisfactory payments on it. This situation would seem, per se, to prove that, given an opportunity to help themselves, these people will live up to their part of the bargain. It should also be pointed out that the medical profession has contributed much in the way of aiding these people by materially reducing fees.

The physicians, recognizing and appreciating that these persons are doing their part to obtain care, meet the situation with a similar spirit. In many instances the doctor's charge is not only cost, but actually below cost, while the service rendered these patients is in no way curtailed.

Glasses for needy school children proved at first to be a problem. A solution was soon evolved. The physicians specializing in eye work held a meeting and established the price of $5 to cover examination and service for this group of patients. Optical companies cooperated in the move by providing the glasses at cost. Still more assistance was given this phase of medical care by the Elks Club. For three years the club has provided a fund through which glasses may be purchased for those school children whose parents cannot afford the price of the needed glasses.

A similar program, as pointed out previously, is being established by the League for the Hard of Hearing, which will pay for tonsil operations in instances in which the tonsils are affecting the hearing of a school child.

The local chapter of the Red Cross has contributed $200 to assist in meeting the medical problems in this borderline group which lives in outlying townships.

Through cooperative arrangements the problem of x-rays for tuberculosis suspects is rapidly being met. Clients who are unable to pay regular fees for a chest x-ray may obtain one at a reduced fee of $3. In the event they cannot pay that amount in full the Wichita Tuberculosis Association will make up the difference, and in some cases they will even pay the entire cost of the x-ray.

Obviously in some instances, such as when the treatment required is extensive or when it is a major surgical case with a lengthy convalescent period involved, the family cannot afford to meet the expense, even at greatly reduced fees. Through the recommendation of the

TRULY A REVELATION
To watch babies of pre-walking age enjoying the safe, healthful pleasures of Taylor-Tot-ing, both indoors as a Baby Walker and outdoors as a Stroller, is truly a revelation. They simply glow with delight. Your baby, too, can enjoy a genuine Taylor-Tot, for there is a model to fit every budget. See your dealer today, or write The Frank F. Taylor Co., Dept. H, Cincinnati, Ohio.
TAYLOR-TOT
BABY WALKER AND STROLLER

BABY COMING?

Consult your doctor regularly. Diet and exercise should be regulated from the earliest days of pregnancy. Your doctor's constant advice on the right foods and amount can control your weight and keep the baby the right size to facilitate birth. Above all, ask a doctor's advice on feeding infant.

SAFER because easier to clean!

HYGEIA
NURSING BOTTLE AND NIPPLE

BOOKLETS for MOTHERS

"Bad Habits in Good Babies" Thumb sucking; crying; feeding; shyness; stubbornness; bowel and bladder control. 16 pages. 15c.

"Keeping Your Baby Well" General advice on infant care and feeding. Prenatal counsel; the newborn baby; breast feeding; weaning. 22 pages. 10c.

"What Does Your Baby Put in His Mouth?" How to prevent accidents from choking and what to do if they happen. Generously illustrated with x-ray pictures and photographs. 24 pages. 10c.

"A Child Is To Be Born" General care of expectant mother, including exercise, bathing, diet, teeth and clothing and planning layette. 45 pages. 10c.

American Medical Ass'n, 535 N. Dearborn St., Chicago

Thumb-Sucking PREVENTED

Simply apply BITE-X to thumbs or finger tips. It instantly forms a tough transparent unpalatable coating. Also stops nail biting. Contains Aloin, 3.1%—Resin, 1.5% in a collodion base. Approved by child specialists. Send for free booklet.

Satisfactory Results or Money Refunded

MAIL $1.00 to Dept. H144

CHILD WELFARE GUILD, 386 4th Ave., N.Y.

"YOU CAN THANK KANTWET FOR A

STRAIGHT STURDY BODY"

Doctors recommend a *firm* crib mattress . . . .

Only a tufted crib mattress can give the firm support so vital to proper bone development. Only a KANTWET gives tufted firmness and is guaranteed wetproof, washable and dustproof. You owe Baby the comfort . . . and yourself the convenience . . . of *guaranteed* KANTWET Crib Mattresses and Pads for all kinds of nursery furniture.

Check these
GUARANTEED FEATURES
√ WET-PROOF √ DUST-PROOF
√ WASHABLE √ SANITARY

Ask for KANTWET High Chair Pads, Play Yard Rugs, Carriage and Bassinet Pads, Duty Seats and Scale Pads. They are made better and are more attractively styled.

SEND for free copy of "For Baby's Health." Address Rose-Derry Co., 409 Chapel Street, Newton, Mass.

KANTWET
Crib Mattresses
WET-PROOF · WASHABLE · DUST-PROOF
SANITARY YET NON-RUBBERIZED

Medical Service Bureau, such cases are admitted for care to the county hospital.

In studying 1,123 persons who have been given assistance through the bureau during 1939, we find the services rendered fall into the following categories:

Glasses	175
Dermatology	6
Medicine	149
Venereal Diseases	313
Tonsillectomies	87
X-ray Examinations	158
Other Examinations	119
Surgery	33
Obstetrics	40
Dental	37
Orthopedics	6
	1,123

In viewing the situation at long range, we see that many of these persons probably would have gone without needed medical care. Not because the care was not available in some form, but because there was no established method for persons in this financial bracket to reach the available care. Many of these persons, too, probably would have received charity care at the expense of the county.

As an outgrowth of the meeting of seven physicians more than four years ago, Wichita has solved the problem of medical care, not only for the great group of borderline individuals but for the community as a whole. The totally-indigent patients obtain their care at the county clinic and hospital, while those in middle or higher brackets continue to obtain care in the established manner.

The Medical Service Bureau accomplishes these things: (1) It eliminates to a great degree the abuse of charity by determining whether the patient can afford to pay for medical care; (2) it enables the patient to obtain competent medical care; (3) it permits a definite agreement as to the fee and the manner in which it shall be paid. (4) It preserves the physician-patient relationship and free choice of physician. (5) It saves the physician the time required for accurately determining the patient's ability to pay. (6) It boosts the patient's morale and sense of financial independence by enabling him to pay for his service, even though it is a reduced fee. (7) It furnishes a practical, working demonstration that a community can well handle its own medical problem without a plan of state medicine.

The citizens, the Community Chest and the physicians of Wichita believe they have offered a solution to the question of medical care for all the people. Their solution bears no taint of bureaucratic management, or of compulsory prepayment of insurance. Rather it is a problem which is individual and local and has been met locally with local funds and cooperation of local agencies. Perhaps this is the answer to those who advocate the socialization of medicine. At least Wichitans believe so.

THE CHILD AT THE FAMILY TABLE

Children growing fast and playing hard need foods that will produce strong bones and teeth, build tissue, make red blood and furnish energy. But children's stomachs are small and quickly filled. So every bite they eat must be as full of food value as possible.

Milk is the most economical source of the materials needed for growth. From three to four glasses during the day are needed. Most children like to drink milk, but it is often best to give the milk at the end of the meal, so it will not crowd out other foods that are also important. Some milk can also be included in cooked foods.

Eggs are also excellent body builders. They are rich in protein, vitamins and minerals. Give the child at least four or five eggs a week. Serve them soft-cooked, poached, shirred or baked. Or use the eggs in custards or in soufflés, with vegetables or cheese.

"At least four servings of fruit and vegetables a day," is a good rule to follow for the entire family.

Cereals are another "must" in the well planned diet. Whole grain cereals, including whole-grain flour for bread, are especially important for their vitamins and minerals. But don't forget to count rice, grits, macaroni, spaghetti and noodles as cereals that supply energy.

Lean meats are quite suitable for children once a day; and some time during the week, the child's meal dish should be liver or kidney or sweetbreads. Coarse stringy meat is hard for a child to chew, so it is best to grind it or chop it fine.

MEDICINE IN THE NEWS

"Medicine in the News," the weekly dramatized health program of the American Medical Association and the National Broadcasting Company, will close with the broadcast of Thursday, May 23, after a successful season.

There will be a program of special broadcasts coordinated with the annual Scientific Assembly and Scientific Exhibit of the American Medical Association held in New York City during the week of June 10 to 14.

At the meeting of the American Medical Association each year there are clinical lectures, scientific programs in sixteen scientific sections, motion pictures, exhibits, demonstrations and conferences at which are presented results of clinical observation and research carried on all over the United States. The entire range of medical science is covered by these exhibits and scientific papers. From them will originate some of the biggest medical news of the year.

These will form the basis for radio talks by outstanding physicians from all parts of the United States assembled in New York for the meeting. Officers of the Association will broadcast over the networks of the National Broadcasting Company and the Columbia Broadcasting System and over many New York stations which do not have network connections. Among the local broadcasts will be messages specially translated for foreign language groups in New York and other Eastern cities.

During the week of June 10 to 14 Medicine in the News will be broadcast from the New York meeting at many different hours and over many different stations. Schedules could not be completed in time to be announced in HYGEIA, but listeners can get the necessary information from the daily radio announcements in the newspapers.

Our weekly dramatized program, which has been highly successful during the season of 1939 to 1940, will be on the air again in the fall of 1940 under the same title, if present plans materialize. HYGEIA readers who have listened to Medicine in the News are invited to write expressing their comments on the program and to give suggestions as to topics which would be of special interest to them when Medicine in the News goes on the air again.

TUNE IN HERE

New England States

WNBC	New Britain, Conn.
WLBZ	Bangor, Me.
WEAN	Providence, R. I.

Middle Atlantic States

WABY	Albany, N. Y.
WBEN	Buffalo
WJTN	Jamestown, N. Y.
WJZ	New York City
WMFF	Plattsburg, N. Y.
WSAN	Allentown, Pa.
WLEU	Erie, Pa.
WKBO	Harrisburg, Pa.
WGAL	Lancaster, Pa.
WFIL	Philadelphia
KDKA	Pittsburgh
WORK	York, Pa.

East North Central States

WENR	Chicago
WGL	Fort Wayne, Ind.
WBOW	Terre Haute, Ind.
WBCM	Bay City, Mich.
WXYZ	Detroit
WFDF	Flint, Mich.
WIBM	Jackson, Mich.
WJIM	Lansing, Mich.
WSAI	Cincinnati
WING	Dayton, Ohio
WIBA	Madison, Wis.

West North Central States

KSO	Des Moines, Iowa
KMA	Shenandoah, Iowa
KSCJ	Sioux City, Iowa
WREN	Lawrence, Kan.
KANS	Wichita, Kan.
KYSM	Mankato, Minn.
WTCN	Minneapolis
KROC	Rochester, Minn.
KFAM	St. Cloud, Minn.
KWK	St. Louis
KSOO	Sioux Falls, S. D.

South Atlantic States

WCOA	Pensacola, Fla.
WAGA	Atlanta, Ga.
WSOC	Charlotte, N. C.
WTAR	Norfolk, Va.
WRTD	Richmond, Va.
WCKV	Charleston, W. Va.
WBLK	Clarksburg, W. Va.

East South Central States

WAVE	Louisville, Ky.
WAPO	Chattanooga, Tenn.
WROL	Knoxville, Tenn.

West South Central States

WJBO	Baton Rouge, La.
KTOK	Oklahoma City
KFDM	Beaumont, Texas
KTSM	El Paso, Texas
KGKO	Fort Worth, Texas
KXYZ	Houston, Texas
KRGV	Weslaco, Texas

Mountain States

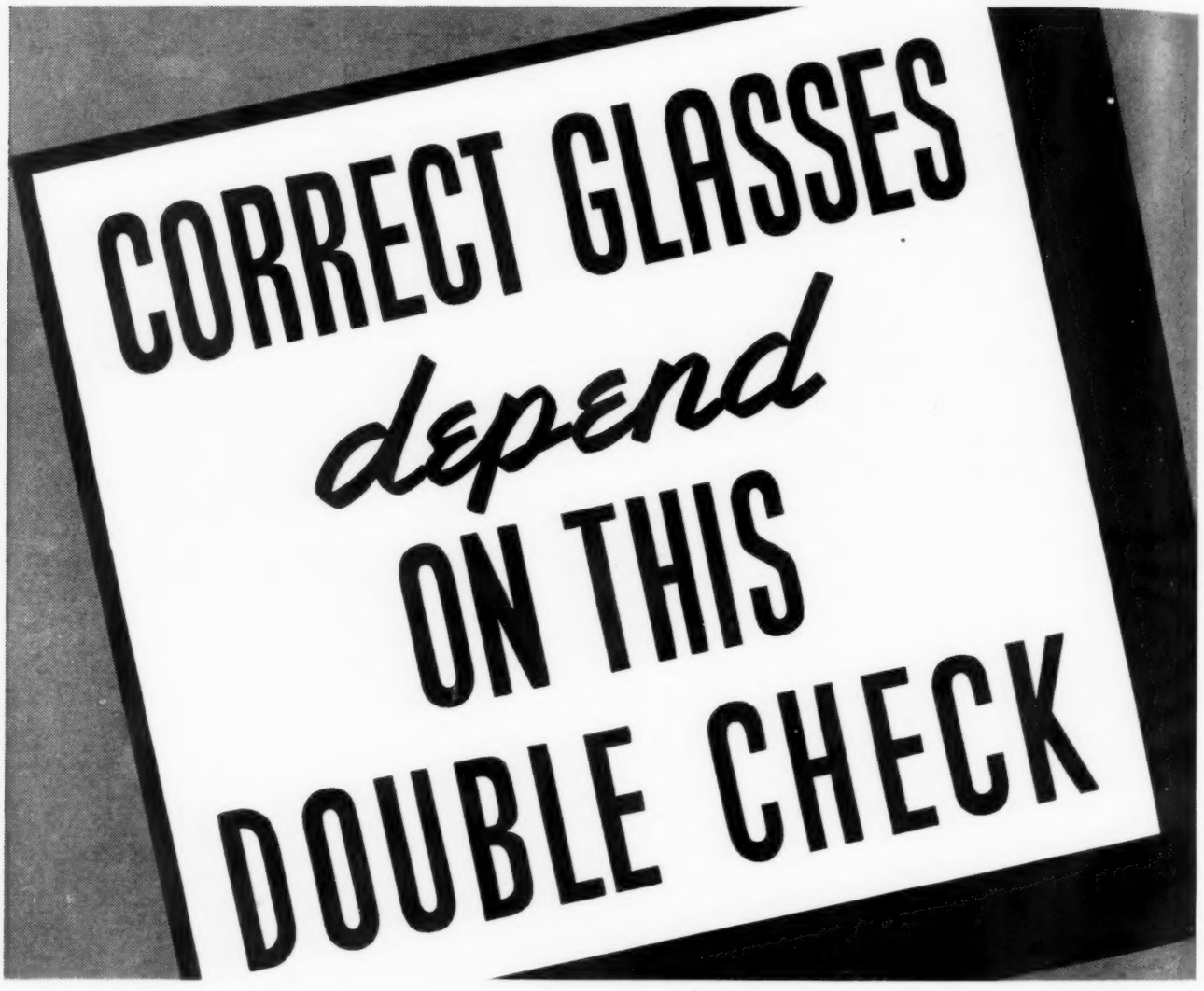
KTAR	Phoenix, Ariz.
KVOA	Tucson, Ariz.
KVOD	Denver
KGHF	Pueblo, Colo.
KOB	Albuquerque, N. M.
KLO	Ogden, Utah
KUTA	Salt Lake City

Pacific States

KECA	Los Angeles
KFSD	San Diego, Calif.
KGO	San Francisco
KTMS	Santa Barbara, Calif.
KEX	Portland, Ore.
KJR	Seattle
KGA	Spokane

Canada

CFCF	Montreal



LOOK FOR THIS SIGN GUILD Rx OPTICIANS

Guild

are recommended

CALIFORNIA
Los Angeles
HEIMANN, MONROE & JONES (2 Stores)
Modesto
FRANKLIN OPTICAL CO.
Oakland
FRANKLIN OPTICAL COMPANY (2 Stores)
Pasadena
ARTHUR HEIMANN
Richmond
FRANKLIN OPTICAL CO.
Sacramento
CHINN, HAROLD
San Francisco
TRAINER-PARSONS OPT. CO.
JOHN F. WOOSTER CO.

COLORADO
Denver
SYMONDS-ATKINSON OPTICAL CO.

CONNECTICUT
Bridgeport
WAKEMAN & ANDERSON
THE HARVEY & LEWIS CO.
FRITZ & HAWLEY
New Haven
THE HARVEY & LEWIS CO.
FRITZ & HAWLEY
CONRAD KASACK
Hartford
LOWRY & JOYCE
THE HARVEY & LEWIS CO.
New Britain
THE HARVEY & LEWIS CO.
Waterbury
WILHELM, INC.

DELAWARE
Wilmington
THE BAYNARD OPTICAL CO.
CHAS. M. BANKS OPTICAL CO.

DISTRICT OF COLUMBIA
Washington
EDMONDS, OPTICIAN (2 Stores)
FRANKLIN & CO.
HUFFER-SHINN OPTICAL CO.
ROBERT J. SIME
TEUNIS BROTHERS

FLORIDA
Miami
HAGELGANS OPTICAL CO.

GEORGIA
Atlanta
WALTER BALLARD OPT. CO. (3 Stores)
Macon
W. B. KEILY, OPTICIAN

ILLINOIS
Chicago
ALMER COE & CO.
Evanston
ALMER COE & CO.

KENTUCKY
Louisville
THE BALL OPTICAL CO.
SOUTHERN OPTICAL CO. (2 Stores)
MUTH OPTICAL CO.

MARYLAND
Baltimore
BOWEN & KING, INC.
D. HARRY CHAMBERS, INC.
ALFRED A. EUKER

MASSACHUSETTS
Boston
BARTLETT & SON CO.
CHILDS, CARL O.
DAVIDSON & VIRGIN
CHARLES J. HART
EDWARD W. HELDT
MONTGOMERY FROST CO. (3 Stores)
ANDREW J. LLOYD COMPANY (3 Stores)
HENRY O. PARSONS
PINKHAM & SMITH CO. (2 Stores)
POLLARD, RALPH L.
Cambridge
ANDREW J. LLOYD COMPANY
Greenfield
SCHAFF OPTICIAN
Springfield
CLARKE, ALBERT L.
THE HARVEY & LEWIS CO.
Waltham
BENNET E. O'NEIL, OPTICIAN
Worcester
JOHN C. FREEMAN & CO.
THE HARVEY & LEWIS CO.

MINNESOTA
Minneapolis
M. J. CARTER
Rochester
A. A. SCHROEDER
St. Paul
ARTHUR F. WILLIAMS

MISSOURI
St. Louis
ALOE'S OPTICAL CO.
GEO. D. FISHER OPTICAL CO. (2 Stores)
ERKER BROS. OPTICAL CO.
JOHN A. GUHL, INC.

NEW JERSEY
Asbury Park
ANSPACH BROS.
Atlantic City
FREUND BROTHERS
Camden
J. E. LIMEBURNER CO.
PELOUZE & CAMPBELL
East Orange
ANSPACH BROS.
DEUCHLER, HAROLD C.
Elizabeth
BRUNNER'S
Englewood
HOFFRITZ, FRED G.
Hackensack
HOFFRITZ & PETZOLD
Jersey City
WILLIAM H. CLARK
Montclair
STANLEY M. CROWELL CO.
MARSHALL, RALPH E.
Morristown
JOHN L. BROWN
Newark
ANSPACH BROS.
REISS, J. C.
CHARLES STEIGLER
EDWARD ANSPACH
Plainfield
GALL & LEMBKE
Summit
ANSPACH BROS.
Trenton
WILLIAM DARLING
Westfield
BRUNNER'S

NEW YORK
Albany
MARSTON, HOWARD E.

★ ASK ANY GUILD OPTICIAN FOR THE NAMES

*Eye Physician

The Eye Physician alone can decide whether it is the eyes themselves that are at fault or whether the trouble is a reflected symptom from some other bodily ailment; because he is an M.D. (Oculist) who has specialized in the study and treatment of the eyes. The Eye Physician will not only safeguard your eyesight, but actually preserve your general health.

Phone any Guild Optician for the names of Eye Physicians in your vicinity

Guild Optician

Take your Eye Physician's prescription to a GUILD OPTICIAN. Upon his skill, integrity and experience you can safely depend. You can be sure he will give you the finest quality lenses and frames, and the most expert workmanship resulting from years of devotion to his profession. At his hands you know you'll receive the full benefit of your Eye Physician's Prescription. And thus you *double check* your eyesight.

FREE! ... without obligation, any Guild Optician will send this authoritative booklet on care of the eyes... and the name of an Eye Physician in your vicinity. Call or write for your copy today.

Opticians by physicians

GUILD OPTICIANS — LOOK FOR THIS SIGN

Babylon
PICKUP & BROWN, INC.
Bronxville
SCHOENIG & CO., INC.
Buffalo
BUFFALO OPTICAL CO. (2 Stores)
GIBSON & DOTY
FORREST OPTICAL CO.
FRANK & LESSWING OPTICAL CO.
PRECHTEL OPTICAL CO.
SCHLAGER & SCHLAGER
FOX & STANILAND, INC. (2 Stores)
URSIN-SMITH GUILD OPTICIANS
Kenmore
BUFFALO OPTICAL CO.
GIBSON & DOTY
New Rochelle
BATTERSON, JOHN P.
New York City
LUGENE, INC. (2 Stores)
EDWARD J. BOYES
E. B. MEYROWITZ, INC. (6 Stores)
FRYXELL & HILL
HARTINGER, EDWARD T.
A. HAUSTETTER, INC.
HOAGLAND, J. S.
CLAIRMONT & NICHOLS CO.
GALL & LEMBKE
AITCHISON & CO.
PICKUP & BROWN, INC.
H. L. PURDY, INC.
SCHOENIG & CO., INC.
Brooklyn
BADGLEY, H. C.
E. B. MEYROWITZ, INC.
DOUDIET, ERNEST A.
J. B. HOECKER, INC.
J. H. PENNY, INC. (2 Stores)
A. M. SHUTT
TEDESCO BROTHERS
Hempstead
C. WALTER SEE
Jamaica, L. I.
HANSEN, JOHN
Rochester
WILLIAM J. HICKEY
WHELPLEY & PAUL
WALDERT OPTICAL CO.
Schenectady
DAY, JAMES E.
OWEN OPTICAL COMPANY
Syracuse
CARPENTER & HUGHES
CLOVER-WHITE OPT. CO.
EDWARD HOMMEL & SONS
Watertown
ROBERT L. MEADE
White Plains
JOSEPH E. KELLY
CLAIRMONT & NICHOLS CO.
SAMUEL PEYSER
OHIO
Cincinnati
ETTER BROTHERS
KOHLER & CO.
SOUTHERN OPTICAL CO.
Cleveland
E. B. BROWN OPTICAL CO.
HABERACKER OPTICAL CO.
REED & McAULIFFE, INC.
HENRY J. PORTER
OREGON
Portland
MOOR, HAL H.
PENNSYLVANIA
Allentown
L. F. GOODIN
Bethlehem
PRICE, WILLIAM H.
Bryn Mawr
J. E. LIMEBURNER CO.
Erie
HESS BROS.
WILLIAM J. MAGAY CO.
E. K. MEYERS
ERIE OPTICAL CO.
Jenkintown
J. E. LIMEBURNER CO.
Norristown
J. E. LIMEBURNER CO.
Philadelphia
JOSEPH C. FERGUSON, JR., INC.
WALL & OCHS
YARNALL & BENDELL
DOYLE & BOWERS
A. W. BRAEUNINGER, INC.
WILLIAMS, BROWN & EARLE, INC.
JOHN W. CLEARY
CHAS. SIGISMUND CO.
BONSCHUR & HOLMES, INC.
J. E. LIMEBURNER CO.
FELDENS & KIENLE
WILLIAM J. SCOTT, INC.
KEENE & CO.
FRANK A. MORRISON
MULLEN & WOLF
MULLER & FENTON
BENDER & OFF
WILLIAM S. REILLY
WELSH & DAVIS
STREET, LINDER & PROPERT
WILLIAM M. WEBER SONS
THE WM. F. REIMOLD CO.
WINFIELD DONAT CO.
JOSEPH ZENTMAYER
Pittsburgh
GEO. B. REED & CO.
DAVIDSON & CO.
DUNN-SCOTT CO.
GEORGE W. HAAS, INC.
R. K. ELLIOTT CO.
F. J. MALONEY
CHARLES F. O'HANLAN
FRANK G. PERRY
SHALER & CRAWFORD, INC.
Upper Darby
J. E. LIMEBURNER CO.
SOUTH CAROLINA
Charleston
CROWE OPTICIANS—GATLIN, SUCCESSOR
VIRGINIA
Norfolk
E. E. BURHANS OPTICAL CO., INC.
WASHINGTON
Seattle
CHARLES R. OLMSTEAD, INC.
CANADA
Montreal
BARIL & STRATH, INC.
R. N. TAYLOR & CO., LTD.
Ottawa, Ontario
SUTHERLAND & PARKINS
Toronto
FRED SHORNEY, LTD.
J. C. WILLIAMS (2 Stores)
Vancouver, B. C.
HALE OPTICAL CO., LTD.
Winnipeg, Manitoba
RAMSAY, ROBERT S.

OF *EYE PHYSICIANS IN YOUR VICINITY

★SEX EDUCATION BOOKLETS

A Series by

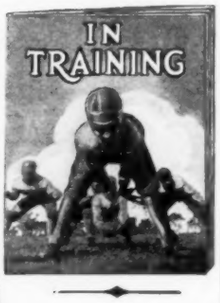
THURMAN B. RICE, M.D.

For Boys and Girls of Ten

How life comes from life—How flowers are born—Male and female functions in fish, frogs, turtles, birds, calves, colts, kittens and human beings—Simple facts about sex hygiene. **36 pages**

For Boys of High School Age

How sex influences every minute of life—Clean sports—The fun of hobbies—The miracle of Life—Human mating—Purposes, physiology and hygiene of sex—How marriage protects the race. **48 pages**



For Girls of High School Age

Motherhood, the great career—How reproductive organs function—Menstruation, its physiology and hygiene—Athletics for girls—True feminine attractiveness—Going out with boys—Marriage. **38 pages**

For Both Sexes of College Age

Training for happy home life—Sex feeling of male versus female—Control: a mutual responsibility—Premarital understandings—Planning for parenthood—Ideal honeymoon—Two purposes of sex. **44 pages**

For Persons of College Age or Older

Prevalence of venereal diseases—Effects on individual and on society—Syphilis and its transmission—Protective measures—Symptoms and stages—Gonorrhea and other diseases. **40 pages**

Heavy paper covers ***25 cents per copy***

Complete set of five in special filing case, $1.00

AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street Chicago

BIRTHMARKS (Continued from page 516)

tic or diagnostic purposes, should be carried out in a manner more radical than is generally necessary or advisable in dealing with other nevi. When considering the advisability of treating the slate-black or blue moles or smooth brown or black birthmarks, only expert opinion should be the guide. It is remarkable, though, how many otherwise intelligent persons will take advice from some chance or casual nonmedical acquaintance met on the street corner. They learn their fatal error usually too late to profit from their own mistake, and those who should hear of such things apparently rarely do.

In the second division of group II is the pigmented and hairy type of birthmark. Fortunately, this mark is more common than the one just described; still more fortunately, these marks rarely change into cancer. The pigmented and hairy nevi vary greatly in size and shape. They may be small round areas, or they may occupy a considerable portion of the patient's entire body. Many of the so-called "bathing trunk" nevi are of the pigmented hairy variety and occupy that portion of the body that would be covered by a pair of bathing trunks. Most moles are pigmented and hairy. None of these marks should ever be treated with radium. Although the color may be destroyed by applications of carbon dioxide snow, the hair is usually not removed in this manner. The hair generally requires electrolysis for its removal. Electrolysis sometimes takes away the pigment also, but not without considerable irritation to the mark. While in most instances such treatments may be given with perfect safety, surgical removal or electro-desiccation is the treatment of choice, when possible.

A third variety in group II is the pigmented warty or plain warty nevus. There are a great variety of these lesions, some of which are hard and others soft. The shapes and designs they may assume are innumerable; they may cover large areas of the body or assume the most bizarre patterns. While it is possible that this type of mark may result in cancer, this occurs rarely, probably not more often than would occur with an area of normal skin subjected to the same irritation that the birthmark may have received. When pigmentation is not too pronounced, these warty nevi may be removed much as one would remove an ordinary wart either by electro-desiccation [drying by electric needle], curettage [scraping], cauterization or surgical excision.

The pigmented, hairy and warty nevi comprise the fourth variety. In this mark we have a combination of the two preceding types. This type is no more dangerous than the last two varieties just described, and the treatment is also the same; the smooth, hairless, nonwarty type (division 1) being the dangerous one.

Group III in our major classification of birthmarks consists of miscellaneous and rare types. Here may be catalogued all those birthmarks which cannot be grouped under the blood vessel or the pigmented, hairy or warty varieties already described. To enumerate all the kinds that might be added here would make a formidable list, owing to the tremendous number of names and great assortment of birthmarks that physicians have described. It must be said, however, that the majority of these marks are exceedingly rare. We must include here birthmarks arising from the sweat or oil glands, fat or connective tissue as well as other types that are even more uncommon. Most of these marks have no special relationship to cancer and probably, if we except the oil or sebaceous gland nevi, are not likely to prove dangerous. Their treatment cannot be discussed further than to state that each case must be individualized and managed by some one of the methods already described for the previous varieties.

With the exception of certain types of smooth pigmented marks, most birthmarks are not prone to terminate in cancer.

When in doubt about a birthmark, do not hesitate to consult an authority, as most often advice is probably all that will be necessary, rather than radical treatment. For the blood vessel birthmarks, early, moderate dosage with radium usually yields better results than can be achieved by nature or by long delayed treatment which necessitates greater dosage. Remember, the mark which may be the most dangerous is the smooth pigmented one, devoid of hairs.

Although these students have completed certain academic requirements, they lack knowledge of how to keep healthy.

Graduated—with Cavities

By J. MACE ANDRESS

BELOIT, KAN., is not a large city. It numbers only 3,500 inhabitants and is located in the north central part of the state; but not long ago its school superintendent made a discovery that bids well not only to revolutionize its own plan for health education but also to spread to other towns and cities and even states. The discovery was this: The superintendent found that Mary Dunn had graduated from high school with a diploma under her arm and twenty-one cavities in her teeth. This showed as nothing else could show what a failure health education had been in the Beloit schools.

This little city was not alone in having such a record. There were other Beloits in Kansas and in every state in the union, with their Mary Dunns graduating with about the same number of dental cavities. The only difference was the awareness at Beloit that dental education there had been a conspicuous failure. "It takes a shock like this," said the superintendent, "to awaken one to the fact that schools have other important tasks to perform than simply to teach the subject matter enclosed between the two covers of a textbook. Not until I learned of Mary's case did I think of the importance of health teaching to the extent that I felt I should do something about it." He did do something about it.

A plan was inaugurated to secure dental examinations for all pupils. Only 15 per cent had mouths that would pass inspection. More than 2,500 cavities and other disease conditions were found. This inspection gave data around which to build a corrective program. It was found that 34 per cent of the students could not afford to pay for dental care. Arrangements were made so that one third of the entire expense was borne by the county, one third by the Red Cross and one third of the cases were admitted for free dental service at the Community Hospital. Through the cooperation of the teachers, dentists and various agencies, the dental program was successfully completed for the year. This was one of the first times that dental corrections had been made for the children of an entire school system. The dental program is being carried on with vigor and efficiency. Under date of Jan. 17, 1940, the superintendent writes, "The way this program works, it is possible for a teacher to insist that every youngster pass the dental examination in the same manner that he passes the arithmetic requirement. If they object on account of finances the matter can be taken up through one of our agencies."

The case of Mary Dunn spotlighted the need for and importance of preventive dentistry in the schools of Beloit, Kan. Let us hope that it will spread to the country as a whole. May this program also be more extensive so as to cover the broader aspects of health. There seems to be every reason why high school graduates should be reasonably free from remediable defects. What astounding commencement announcements we would have, if we published bits of facts about the remediable defects of present-day graduates! In addition to notes like that on Mary Dunn we might have others such as:

> John Wilson graduated but with bad posture
>
> Annie Jones graduated but with diseased tonsils
>
> Olive Matthison graduated but very much underweight

In time we may expect some such statement as this: *All graduates have satisfied the requirements of physical and mental fitness and all are thereby entitled to the diploma of the ..... School.*

To require actual achievements in health standards for graduation would put teeth into every phase of health education. Isn't it about time that we ceased to prate so much about health being the first aim in education and then forget our pious promises? Let us have more actual achievements.

We need more Beloit awakenings!

Using Scientific Sources

By EFFIE F. KNOWLTON

In an age when the radio and the press are allowing unprovable statements to be made about drugs in the prevention and cure of disease, it behooves schools to counteract this pernicious propaganda. Miss Knowlton, formerly director of health education at Binghamton, N. Y., describes a unit of work in which a search is made for reliable sources of information on health in cooperation with a woman's auxiliary of a medical society. This is a type of activity which needs encouragement in all our schools.

WHO is "the doctor"? Can I "believe my ears" when listening to the radio? Such questions as these led to a unit of work which has appeared to be of real value in the junior high schools of Binghamton, N. Y.

The Woman's Auxiliary of the Broome County, N. Y., Medical Society recently approached school authorities of Binghamton with the suggestion that the two organizations be cosponsors of a pupils' contest on scientific sources of information on health problems. Since the subject is a live one and since the schools are experimenting in the correlation of departments, they accepted the proposal as an educational opportunity.

A committee of teachers of English and hygiene or biology, with the directors of English and health education, made recommendations for procedures in the cooperative project. Another committee of teachers of biology and hygiene, working with the director of health education, developed a work plan dealing particularly with content and organization of material and a bibliography.

The general objectives of the unit of work were (1) to develop or strengthen each pupil's realization of the significance *to him* of scientific sources on ways of living, (2) to help the pupil to discover where to go for such scientific information and (3) to encourage him to use it intelligently.

Among the approaches teachers used were pupils' questions, pupils' experiences in making purchases, discussion of advertisements and newspaper clippings and comments on radio programs.

Procedures for the development of the unit suggested that teacher and pupils cooperate in setting up problems having meaning to the particular group. Problems which presented themselves were such as these:

How reliable are the advertisements in newspapers and magazines?

Can I "believe my ears" when listening to the radio?

How can I tell which of the books on health to choose? Who is "the doctor"?

Where can I find information so that I may make more intelligent purchases?

Under teacher guidance, pupils themselves were able to suggest activities for the solution of problems. However, teachers realized their need to think through desirable experiences in advance, so that they might best guide the group. Throughout the development of this unit, emphasis was placed on constructive suggestions; teachers realized the danger that pupils might be overwhelmed and perhaps secretly dismayed if too much negative material were presented.

The health committee suggested these and other activities for pupils, advising that critical choice be made, according to the needs and interests of the group. They were:

Bring to class several advertisements from newspapers and magazines which interest you especially.

Discuss and evaluate a few of these advertisements as a group. Evaluate one by yourself, then report to the group, and ask for their comments on your evaluation.

Read to find the opinions of real investigators on the accuracy of advertisements.

Find out what laws regulate advertising and the problems of enforcing such laws.

Take down as exactly as you can the claims made over the radio on one of your favorite programs. Bring them to class for evaluation and discussion.

In regard to one of your favorite purchases, *compare* the claims made by radio and newspaper advertising with the label on the package.

Examine the title page of several reference books and textbooks in your class library. Discuss how much you would be influenced by the name and experience of the author. Discuss why it is difficult for textbooks to be strictly up to date.

Make a list in class of the different kinds of doctors you know. Find out what you can about the training required.

Compare your own ability to prescribe for an illness or ailment with that of a physician. Find out whether or not self medication is common. Discuss your findings in class.

Interview a city physician in regard to some problem you are studying. Plan the questions in advance, and report your findings to the class.

Make a survey to find whether members of your group are influenced in their ways of living today by superstitions of the past.

For some common product used frequently in self medication, *compare* the claims made by advertising and the scientific facts, or write a letter to the American Medical Association to get its opinion.

Discuss a sensible procedure for the person who wants to reduce weight. Include in your plan suggestions on where to seek advice. If you are interested, evaluate some common reducing diet.

Arrange an exhibit to show some of the many ways in which an attempt is made to influence or advise the purchaser. Plan and give the class a talk about the exhibit, evaluating the different kinds of information displayed.

Write an article on one or more of the problems you have investigated, to be read in class or submitted in a class contest.

Summarize the suggestions which have been made. Are they practical? How many can you use?

Many teaching materials were brought to classes by the pupils themselves; among these were advertisements from newspapers and magazines, labels, copies of advertising claims made over the radio (taken down by listener), lists of products sold over drug counters without prescription and scientific references and "popular" books or magazines on health for comparison.

That it is difficult to measure the results of such teaching is obvious. However, teachers looked for desired outcomes such as these:

Do pupils have a greater realization of the significance of this problem?

Have pupils developed in intelligent selection of information?

Do they know where to find the best information available?

Are pupils guided by scientific information in making decisions about purchases and in other choices?

In preparation for this unit of work, an extensive bibliography to which all health teachers had been asked to contribute was submitted by the guiding committee. Suggested references included books located in the individual schools, in public libraries and in the central office of health education and periodicals in school and public libraries; there were forty specific references to the files of HYGEIA, covering seven consecutive years.

At the close of the unit, a 500 word article was written by each pupil of the eighth and ninth grades and by any interested pupil of the seventh grade; each wrote on that phase of the study most appealing to him.

Recognition was given by the Woman's Auxiliary as follows: 1. The best article from each of the six junior high schools won for the school a year's subscription to HYGEIA. 2. A grand prize of a sum of money to be used for the school was awarded the best article selected by a central judging committee. 3. Further recognition of the outstanding articles was given by city and school newspapers and community organizations.

In conclusion, may it be emphasized that throughout this project competitive aspects were subordinate to broader educational aspects, and awards were earned by individuals for their groups rather than for themselves as individuals.

"You are actually unaware of the presence of Tampax!"
"With Tampax you wear no belts, no pins, no pads."
"Perfected by a physician to be worn internally."

THIS NEW SANITARY PROTECTION
(monthly use)
FOR EVERY NORMAL WOMAN

The medical tampon used by physicians is familiar to many . . . *Tampax* applies this same principle of internal absorption to woman's normal monthly problem . . . So Tampax offers not merely an "improved" sanitary protection, but a *new approach.*

Some women, upon discovering Tampax, can scarcely believe it is true—such freedom and comfort that they are *unaware of its presence!* . . . Other women have imagined at first that Tampax was a special kind of product, perhaps not suitable for their case . . . The truth is that Tampax can be used by any normal woman, and is so intended.

Tampax is completely protective, made of extremely absorbent surgical cotton, highly compressed. It cannot come apart. Daintiness assured in any costume. Practical even during dancing, sport activities, taking a bath. No belts, pins or pads. "*No external odor is possible.*"

Each Tampax is sealed hygienically in patented one-time-use applicator. Sold at drug stores and notion counters. Introductory box, 20¢. Full supply for one month now available at new low prices.

Accepted for advertising by the Journal of the American Medical Association.

HY-60-J

TAMPAX INCORPORATED
New Brunswick, N. J.

Please send me in plain wrapper the new trial package of Tampax. I enclose 10¢ (stamps or silver) to cover cost of mailing. Size is checked below:

( ) REGULAR ( ) SUPER ( ) JUNIOR

Name_____

Address_____

City_____ State_____

The Modern Report Card

By CHARLES R. FOSTER Jr.

How can the parent interpret that D in history? He has no clue to what type of guidance his son may need. Narrative reports would indicate this.

Does the school report card contribute to mental health, or is it often a menace to happy and efficient living? Read what a mental hygienist has to say about a newer type of report card. Professor Foster teaches education at Rutgers University.

WHEN a report card comes home, what happens? It has to be signed and returned *promptly*, no time to linger over it. The chances are that Father, if he sees it at all, glances at it on top of the dresser while he is fixing his tie.

To his son he may say:

"A D in English! . . . You'll disgrace the family!"

Or: "Hm . . . I see you only got a C in arithmetic. What's the idea, Bill? John never brought home C's when he was in your grade."

How about the mental hygiene involved in this episode? Comparison of one child with another, for one thing, may undermine the poorer child's confidence. He may feel as though a goal is set for him which he cannot reach.

There is something so final, so inescapable, about marks on a report card. A mark is a mark, and what can you do about it? There isn't a hint on the usual report card as to what the pupil's weaknesses are. Bill Senior got no clues as to how to repair his record from the report cards of thirty years ago, and there are altogether too many Bill Junior's getting the same kind of report cards today.

Some school systems are trying to get away from this formality. In Ridgewood, N. J., the "narrative" type of report card is being used experimentally to overcome the difficulties. Dr. Straub, in describing Ridgewood's plan,[1] asks this question:

> Can't we find a way to make our thoughts clear to parents and others reading our report cards? Can't we make the report do its job of contributing to the total development of the individual child?

The idea of making a report card contribute to the "total development" of the child reflects the mental hygiene point of view. Psychologists realize that letter grades and marks tend to emphasize the competitive spirit. Moreover, educators know that what goes into these marks is anything but clear.

An example of Ridgewood's narrative card follows:

> JUNE—GRADE 4
>
> Billy has worked very hard this year, and has accomplished a great deal. He reads well and reads for content. He writes interesting book reports that show a knowledge of paragraph writing and that he has grasped the content of the book. He has mastered the arithmetic fundamentals and long division, too. He is able to think through one and two step problems in arithmetic. He is very much interested in world events and has done well in the social studies. He is pleasant, friendly, happy and a good mixer. He has the ability to lead, but he does not always lead in the right direction. He is too ready to question authority and likes to argue with those who are in authority. He does things carelessly and in too much of a hurry.

[1] "Designing Word Pictures of Children," by J. Harold Straub. *New Jersey Educational Review*, November 1939.

Another example illustrates a report involving some different items:

NOVEMBER — GRADE 3

Barbara has been doing good work in the social studies, grammar, written composition and music; she acquires skills and abilities readily. Her handwriting would be improved if she would give more attention to size; the letters are so small that her writing is difficult to read. Her art work has been creative. Barbara needs to volunteer more often. Her work in oral composition, arithmetic and spelling has been excellent. She should try to develop more self confidence. She needs to be more self reliant in attacking and solving her problems. Barbara is a very good reader and shows accuracy in following assignments. Her speaking voice is too soft, but it shows improvement. She has a good attitude toward play.

There is something personal and human about these reports. The parent can get a real picture of what is happening at school. The parent has a few "leads" as to what might be done about remedying conditions needing improvement. The pupil is not placed in a severely critical and competitive light, but his adjustment is described in a way which makes possible sympathetic and constructive guidance.

Marking systems which use letter grades or numbers tend to be arbitrary. They are inflexible and allow little opportunity for suggestions as to possible improvement. For example, a report card used by one high school describes the meaning of the letter grades A, B, C and D. We note that the grade D means:

The D pupil makes very few contributions and needs much aid from the teacher. His work is frequently inaccurate. The poor character of his work may be due to lack of ability to comprehend the subject, slovenly work habits, lack of interest or irregular attendance.

The pupil gets a D, let us say, in history. How can the parent interpret this grade? What guidance will he be able to offer the child? How can he know which of the factors described influenced the teacher to give the child a D?

One of the troubles with report cards is that they often use rating scale technics of doubtful value. One card before me at the moment has a list of habits of citizenship. The first item on the list is, "Always completes work." The teacher simply marks this "Yes" or "No." Another item to be marked "Yes" or "No" is, "Does right thing at right time." Here, again, one would be troubled to know the meaning of these marks.

That card is an improvement over another one, however, which simply lists items such as "Reliability," "Courtesy," "Honesty" and so forth. The teacher gives the child an A, B or C on these. Yet who among us is not reliable in some things, unreliable in others, honest in some affairs, but not in all?

A study of Votaw and White[2] showed that parents are more interested in their child's progress in subject matter than in anything else. They do not appreciate the social and personal values in what happens to the child in school.

Few school systems call the attention of parents to the need of care in interpreting marks, although nearly all invite visits to the school.

We catch a glimpse of the mental hygiene influence in report cards in the practice of Summit, N. J. There teachers are advised to confer with parents about difficulties. The teachers are told that the comments they write on report cards "should be brief" and "worded so as to be helpful both to parent and child."

Moreover, the teachers are urged to make their report card comments "positive rather than negative whenever possible," and they are reminded that "something favorable should be said in each case, followed by suggestions for improvement when necessary."

But more mental hygiene is packed into the *instructions to the parent* than anywhere else in the Summit scheme. The report card's message to parents is:

1. Be keenly interested in your child's report, because your interest will be one of his greatest incentives to improvement.

2. Avoid comparison of your child's report with that of another child. Such comparisons cause only discontent, heartache or undue feeling of superiority. It is better for a child to beat his own record rather than that of his neighbor.

3. Avoid any use of the report card as a basis for rewards or punishments.

Incidentally, whatever system of reporting is used, it should encourage intellectual honesty. "Inspirational" marks, given to encourage students who are deficient in various respects, may give the pupil a false sense of his own achievement which might lead later to disillusionment. The descriptive report card can overcome this.

Letter or number grades suffer the fault of "covering up" weaknesses as well as points of strength.

[2] "The Parent and the Report Card," *The School Executive*, July 1937.

MAIDEN FORM'S
"ALLO"
for heavier-than-average breasts
Even though youthfully firm, heavier-than-average breasts are especially susceptible to premature "breaking down." "Allo" was created to safeguard these fuller bosoms and also to give them the well-defined, well-uplifted contours demanded by current fashions. With or without diaphragm bands —$1.00 to $3.50.
For classic rounded lines, choose *"Inter-Lude"—bandeau style or with 2-, 4-, or 6-inch diaphragm band—$1.00 to $3.50. Send for free Style Booklet G: Maiden Form Brassiere Co., Inc., New York, New York.
AT ALL LEADING STORES
Maiden Form
LOOK FOR THIS TRADE-MARK ON
BRASSIERES
GIRDLES · ONCE-OVERS
"There is a Maiden Form for Every Type of Figure!"

JUST OUT!

New 1940 Catalog of Health Publications

Health material galore for home, classroom or public health use! Authentic material, published by the American Medical Association, and covering a wide range of subjects. Sex Education, personal hygiene, child welfare, public health, nutrition, etc. All this material listed in the new 1940 Catalog, including prices! Books, pamphlets, lectures, plays and posters to choose from. Send today for your catalog! It's *free!*

AMERICAN MEDICAL ASS'N. Hy. 5-40
535 North Dearborn St., Chicago

Please send free Health Publication Catalog.

NAME.....

ADDRESS.....

What Has Experience Taught Us?

By JOHN B. DUNNE

What was the accident record for last year? In the light of that record how may we make our safety education more effective? These are some of the questions considered by Mr. Dunne, Fellow at the Center for Safety Education, New York University, who has made a careful survey of the facts.

ANOTHER tragic chapter has been written in the textbooks of accidents for teachers to study. That chapter contains the names of thousands crippled, maimed and killed by accidents. For now as we evaluate the record of 1939, we find that it has been a sad experience indeed. The burden that is education's in cutting down this toll has already been clearly outlined. That is why we find the teachers pondering the record of gains and losses in this apparently uphill fight.

Dealing with facts about accidents would surely make a pessimist out of any "Pollyanna." But fortunately, teachers are, for the most part, optimists—rugged optimists. Teachers have seen the battle waged for healthier children and have noted the satisfactory gains. They have been in the middle of the fight against illiteracy and know what strides have been made. Now that education is becoming one of the most potent forces in curtailing accidents, these rugged optimists are assuming their responsibilities as they have before, certain of ultimate success.

It is one thing to be optimistic and still another to be gullible. A teacher would be extremely gullible who would count the gains that have been made and not reckon the losses. Thus, a full comprehension of accident trends is necessary to help the teacher determine proper emphasis in teaching safety. In short, a teacher must know what accidents have the greatest frequency in her community and direct her teaching in channels that will be most effective in preventing these accidents. In a school where only a few pupils ride bicycles, she should spend but little time and effort in teaching bicycle safety. If a number of tenement fires have occurred in that neighborhood, fire prevention would certainly be given an important place in lessons in accident prevention. What we wish to point out is that more importance lies in local statistics for the average teacher than in the larger more comprehensive national figures.

In reports now available for 1939, it appears that the gains of 1938 were not reflected in the experience of the past year. Approximately 32,600 persons were killed in traffic accidents against 32,582 for 1938.

Since most traffic fatalities to children are chargeable as pedestrian deaths, teachers will be heartened to note that there was a drop of 3 per cent in pedestrian accidents for the first ten months of 1939.

The figures available for bicycle fatalities and injuries indicate that 675 cyclists lost their lives and approximately 35,000 were injured last year. In 1938, 700 were killed and the same number reported injured.

Of those injured and killed on bicycles 17,500 were in the 5 to 14 year age bracket. In the next age group from 15 to 24, 13,000 were injured and killed.

The home again contributed its share to the national toll of injuries and deaths. In 1939, approximately 31,320 fatalities in the home were reported. There was no appreciable change over the 1938 toll. There was an increase in fatal falls and burns, but asphyxiations decreased.

Drownings increased somewhat last year over the annual average, but the total of 6,700 was under the 1938 figure of 7,482 deaths.

Occupational accidents resulted in about 16,000 deaths last year. This is an improvement of about 3 per cent over 1938.

The totals for all accidental deaths for the year may show a slight improvement for the year when all figures are compiled and made known in June.

It is heartening to note that many agencies, states and municipalities are making concerted efforts to control bicycle operation and thus reduce accidents from this source. Connecticut and New York states have made valuable contributions with publications on bicycles put out by their motor vehicle departments. A movie is in preparation on bicycle testing at the New York University Center for Safety Education. The National Safety Council has prepared an excellent publication on this subject. All these efforts are directed to aid the teacher, who must, after all, do the job of educating for safety.

Falls are the greatest single cause of death and injury in the home, causing about 52 per cent of fatalities. Strangely enough, this type of accident caused the second greatest number of injuries in industry. Second to falls, burns caused 17 per cent of the deaths in the home. These two sources of injuries and fatalities give rise to a need for emphasis on accident prevention in the home. The teacher would do well to learn the chief causes of falls and burns which occurred in her own community by making a local survey in hospitals and the coroner's office. Generally speaking, the stairs, rugs and floors are responsible for a large number of falls. Burns usually take the largest toll of life in the kitchen, the yard and the living-room. Other factors may be brought out that would influence the instruction in various schools.

In addition to the loss of life and the suffering in the past year as a result of burns and asphyxiation, there has been a tremendous bill paid in dollars by the American public for fires. According to preliminary estimates, the year 1939 accounted for $314,000,000 loss through fires, an increase over the previous year. To make teaching effective as a factor in reducing the number of fires, units of study should be included each month on this important subject. Student activity projects in all grades directed at removal of fire hazards in the home will be of great value in enlisting the students in an attempt to curtail this huge annual loss.

How about school accidents? A real index of progress in educating against accidents should be reflected by results in this area. Unfortunately, statistics available do not indicate such a trend. Accidents in and around schools showed an increase in 1939. The opening of schools in September marked the beginning of this somewhat discouraging trend, but various factors may influence this record before the end of the school year. It is certain that those schools which have adequate accident reporting systems will be able to analyze their own experience and redouble their efforts to curtail these accidents in the school. Certainly it can be seen that all teachers, principals and others responsible for the well-being of school children must continue their vigilant efforts in order to make the schools safer places in which to be.

Efforts of teachers interested in safety must be directed toward providing students with the knowledge and skills that will enable them to live to enjoy happy, useful lives. In this way, the educator will be making a great contribution to the better safety record of the years to come.

the Revolutionary Bra!

Absolute comfort, perfect support, flawless fit . . . the New Freedom Bra. It has the exclusive separate adjustment feature. Adjustable cup support shown by white lines. Sizes 32 to 44. Ask to see this remarkable garment next time you buy.

Always TRE-ZUR lovely contours

TRE-ZUR BRASSIERE CO.
Los Angeles California

Styled in Hollywood

HEALTH PAMPHLETS

CHILD WELFARE SUPPLIES

—A Child Is to Be Born.....10c
—Keeping Your Baby Well.....10c
—Baby Health Conference.....10c
—Standard Score Card..... 5c
—Record Sheet..... 5c
—Anthropometric Table..... 5c
—Mother's Milk.....15c
—What Baby Puts in His Mouth.....10c
—Entertaining Convalescent Child.....10c

SANITATION AND HYGIENE

—Are You in Business for Health?...10c
—Why Register Births and Deaths?...10c
—The Community Swimming Pool..... 5c
—Pure Water.....10c

COMMUNICABLE DISEASES

—Diphtheria 15c
—Menace of the Unvaccinated..... 7c
—Typhoid Fever.....10c
—Scarlet Fever—Measles.....15c

CONSERVATION OF VISION

—Wearing Glasses.....10c
—Eyes and Vision.....10c
—First Eyeglasses at Middle Age.....10c
—Snellen's Vision Chart.....25c

HEALTH PROBLEMS IN EDUCATION

—Health Inspection of School Children.10c
—Health Inspection Planks..... 5c
—School Health Policies.....25c

MISCELLANEOUS PAMPHLETS

—Psychology of Progressive Deafness.10c
—It Was Only a Scratch..... 5c
—Hernia 10c
—Air Conditioning..... 5c
—Stand Up Straight.....10c
—Left Handedness.....10c

PRICES INCLUDE POSTAGE

AMERICAN MEDICAL ASSOCIATION
535 N. Dearborn Street
CHICAGO, ILLINOIS

Check Pamphlets Desired, Sign Name and Return with Remittance

Name.....

Address.....

• HEALTH POSTERS

TWO SETS . 25c per set

Illustrated are three of the eight posters in Set No. 1. Actual size is 11" x 14". Be sure to indicate which set is wanted. Additional sets of these posters, 25c a set.

• Everyone interested in public health instruction will find a ready use for these excellent but inexpensive posters. Suitable for any age. Each tells a complete story in vivid, telegraphic style. Printed in two colors—on a good quality fairly heavy white paper, size 11" x 14". Conveniently posted with tacks, pins, or stickers.

Shipped Flat

Subjects Covered

SET NO. 1
CANDY • GOOD EYES
KEEPING COOL
HEALTHY HEARTS
CHILD CARE
LAUGHTER
VACATION • COLDS

SET NO. 2
EXERCISE
EARLY HEALTH
LESSONS • PLAY
READY FOR SCHOOL
RELAXATION
SLEEP
YOUTH • FOOD

Order now from the

AMERICAN MEDICAL ASS'N.

535 N. Dearborn Street • Chicago

Let's Build a Sturdy Mansion

By ALICE P. JARRELL

The teaching of health may be alluring to boys and girls. One way to make it attractive is to attach it to some driving interest. The excellent project presented herewith was linked with children's interest to build something.

INTO our midst, each year come children from many and varied types of homes. They come filled with pet likes and dislikes. In most cases they have been problems in the home because of them. Parents lament the fact that Johnnie won't eat his oatmeal, or he just can't be forced to eat a nicely poached egg. Children refuse to drink their glasses of the all-important milk. What the home has failed to do is all too often dumped on the public school; but since we are conscientious, we do what we can to surmount the difficulties. In most cases, they are easily overcome. The most probable reason Johnnie won't eat his oatmeal is because he has heard his mother tell the neighbors so many times that he won't eat it, that he just must keep faith with her and follow through.

In every child there is the desire to build something. Why not build a Health House? Construct it of foods.

Many times in teaching health habits we refer to our body as a house and compare it with one of wood and stone. Nightly we close the windows of our house to rest them from the bright rays of light. We feed the furnace in our body to keep our house warm. At all times we must keep our houses clean and neat. The comparisons are mostly well taken.

Preparation for our building is in order. First, we select the construction material. Some one suggests a box stuccoed with oatmeal. Why do we think oatmeal a good surface material? This manner of questioning and answering brings out the food values the teacher wishes to ground. Some children say they do not like oatmeal. Johnnie doesn't like it. A stucco committee is selected. The committee needs Johnnie very much, and Johnnie likes to stucco. But we cannot use any one to stucco the house who will not eat oatmeal. After all, one must practice what he preaches. We can make arrangements. If Johnnie will provide us with a chart showing that he has eaten a nice helping of oatmeal two or three times a week, he may stay on the committee. Thus, with a little strategy we eliminate the problems.

Every child in the class must participate. Each food selected may be used after it has been proved to be of good building substance. We must know of what value it will be to the body when eaten. Individual meal charts must be kept by the children and presented for a weekly check-up. It isn't long before each child is well aware of what constitutes a proper diet and partakes of it in almost every instance. In cases of homes with limited means, economical substitutes are chosen for the too expensive foods.

The chemical contents of the foods are learned. We know that lettuce is good for building good sturdy teeth because of its calcium content. Teeth need calcium because they are partially made of calcium. In the same way we learn that milk is almost a perfect food, because of its many ingredients necessary for body building.

When the project is complete, we have a cardboard house, stuccoed with oatmeal, roofed with graham crackers, topped with an egg chimney. The window and door facings are done with raisins. Broad leaves of lettuce drape the windows as dainty green curtains behind the

Cellophane panes. The porches are of nicely browned toast, while the walks and driveways are of white beans pasted on cardboard, bordered with sea-shell macaroni. On the drive rests a speedy little roadster, fashioned from a delicious banana, mounted on vanilla wafer wheels. The landscaping is done with carrots with flowing tops for trees, a pool of milk with a grapefruit serving as a pool, flanked all around with dried peaches for stones. String beans hang as vines from the roof of the side porch, while the posts of the porch are stick macaroni with rosy apples as bases. A dog carved of cheese sticks his nose out of the orange rind kennel in one corner of the yard. Carrots sliced and notched like flower petals make a colorful floral array all around the house and out by a garage. A jolly boy and girl, made of toast, view it all from a position behind the flower garden.

Thus, we built an interesting display, and at the same time we filled each boy and girl in the class with the desire to eat plenty of fresh fruits and vegetables, milk, eggs as well as other energy giving foods. Not only was the desire created but actual manipulation of the process was evidenced.

FIRST AID FOR FAIR VISITORS

(Continued from page 531)

the little toe from twisting the foot in holes in the roadways.

As the Fair went on, it was surprising to see how few cases needed hospitalization. In the spring of 1939, the director had several meetings with the Committee on Public Health Relations of the New York Academy of Medicine, and most of the members of this committee believed that the number of cases that would have to be hospitalized from the World's Fair would overtax the hospitals in Manhattan, Queens and the Bronx. In all, during the six months of the Fair period, fewer than 300 patients were hospitalized. Fifteen fatal cases occurred on the site from April 30 to November 1. All but one was due to heart trouble, the exception being an apoplexy.

There were no births on the site. One woman started in labor on her arrival at the Fair, but she had made all her arrangements with a hospital in the vicinity, so that she was taken there by ambulance and delivered a few hours later.

Many preparations had been made for the treatment of alcoholics, but fortunately these were much fewer than was expected. During the whole Fair period, there were only 226 such cases. On account of the limited number of beds available on the grounds, the most severe cases were sent to Bellevue or Queens General hospitals by ambulance. The milder ones were treated with oxygen and carbon dioxide inhalations and sent home after a few hours' sleep.

During 1938, 5,225 patients were treated by the department. These, of course, were all employees of the World's Fair Corporation and of the contractors and subcontractors on the site. From Jan. 1, 1939, to Nov. 1, 1939, 59,271 different patients were treated, which included visitors and employees. The visitors had only one treatment, as no after-care was given them; but if the revisits of the employees are included, the number of patients would be 69,384; and if the examinations of food handlers and Boy Scouts are included, the total number of patients that had gone through the department would be 82,440.

One station was open twenty-four hours a day, this being Station III, which was the largest and was situated in the amusement area. One station was open from 9 a. m. to 2 a. m., two from 9 a. m. to 10 p. m. and two from 9 a. m. to 6 p. m. A physician and two nurses were constantly on duty in each station, and a record clerk was on from 9 a. m. to 6 p. m. Five new ambulances were obtained.

The Board of Health of the City of New York ordered that all food handlers have a complete physical examination and a vaccination against smallpox before starting work, and they must be reexamined every sixty days. This work was taken over by the medical department, and a special physician was taken on for it throughout the Fair period.

Schools and Camps

Has your child heart trouble, asthma, diabetes, nephritis?

He may lead a normal life, grow strong and learn in the sunshine at

La Loma Feliz

SANTA BARBARA, CALIFORNIA

Ina M. Richter, Med. Dir.

John A. Robinson, Senior Master.

Schools and Camps for Exceptional Children

Beverly Farm, Inc. Home and school for nervous and backward children and adults. Successful, social and educational adjustments. Occupational therapy. Dept. for birth injury cases. Healthfully situated on 220-acre tract, 1 hr. from St. Louis. 7 well-equipped buildings, gymnasium. 41st year. Catalog. Groves Blake Smith, M.D., Supt., Box H, Godfrey, Ill.

WILSON SCHOOLS

Year 'round home school for exceptional children. Individual instruction. Only college trained teachers. Medical supervision. Beautiful buildings and grounds. **SPEECH CORRECTION.** Reasonable rates. An ethical school. 9 Arnold Place, Dayton, Ohio.

THE MARY E. POGUE SCHOOL for exceptional children. 37th year. Individual instruction, speech correction. Separate buildings for boys, girls. Epileptics accepted. **G. H. Marquardt, medical director. W. H. Holmes, consultant. Gerard N. Krost, pediatrician. 80 Geneva Road, Wheaton, Ill.**

● TROWBRIDGE TRAINING SCHOOL ●

Home school for nervous, backward children. "*Best in the West.*" Beautiful buildings. Spacious grounds. Experienced teachers. Individual supervision. Resident physician. Enrollment limited. Endorsed by physicians, educators. Booklet E. Haydn Trowbridge, M.D., 1810 Bryant Bldg., Kansas City, Mo.

HEALTH PLAYS

Reprinted from HYGEIA

The School Lunch Room

Eleven to 20 characters; time, 15 minutes. Set of 10 copies, 45 cents. Single copy, 10 cents.

The Medicine Men

A puppet play. 7 characters; time, 10 minutes. Set of 7 copies, 30 cents. Single copy, 5 cents.

Sissy

Four characters; time, 15 minutes. Set of 4 copies, 25 cents. Single copy, 10 cents.

The Gift a King Accepts

Fifteen characters. Set of 15 copies, $1.10. Single copies, 10 cents each.

Afternoon Study Club

Twenty characters; 45 minutes. Set of 20 copies, $1.40. Single copies, 10 cents.

Send for free catalog describing other health material

HYGEIA

535 North Dearborn Street CHICAGO

HEAR and NOW!

(Continued from page 490)

skull readily transmits sound waves to the inner ear. An early hearing aid was a flexible hard rubber fan tightly clenched between the teeth; sound waves unable to pass through the middle ear would strike the fan, flow along the jawbone to the inner ear, thence to the brain.

In 1929 it occurred to Hugo Lieber that if he applied an electrical receiver to the mastoid bone directly behind the ear, vibrations of the spoken word would be picked up by this electrical device and carried by bone conduction to the auditory nerves. By detouring around the middle ear in this fashion, spectacular results were obtained. Today, the principle of bone conduction as developed in the Sonotone device of Lieber is bringing renewed hearing powers to thousands formerly condemned to deafness.

Another great advance in hearing aids was made two years ago with the introduction of vacuum tubes identical with those used in your radio. These make possible high fidelity tone reproduction and can amplify the ticking of a wrist watch to sound like blows of a sledge hammer. Sonotone, Acousticon, Radio Ear and several others now make excellent vacuum tube devices, which compare in weight, size and cost with the best carbon sets.

The prescribing of hearing aids has been taken out of the hit-or-miss realm by a remarkable instrument known as the audiometer. Formerly, an ear specialist asked you to listen to the ticking of a watch held at various distances from your ear. Today, the ticking watch is as archaic as the leech. The modern audiometer is an electrical instrument equipped with earphones which produces pure tones of different pitch and intensity. The hearing acuity of the ear is measured by an air-conduction and a bone-conduction receiver to determine which method gives the best results. Sound intensities are slowly diminished until the person being tested no longer hears them; this point is then marked on the audiogram chart. At the conclusion of the audiogram test, the physician knows exactly how far your impairment has progressed, whether or not both ears are affected and whether you should use a bone-conduction or air-conduction hearing device. When the audiometer is intelligently applied, errors in fitting hearing devices are practically eliminated.

A good hearing device, properly fitted, can be of immeasurable service to most deafened persons. Why then, don't more people walk into the ear specialist's office and demand a hearing aid? The reasons are many. Some persons believe, even while they cup their hand behind their ear, "I'm not deaf enough to need a hearing aid." Others put off the use of a hearing aid because they erroneously believe that it will affect their hearing adversely. "It costs too much" is another common objection. But behind all this resistance offered by various individuals lies a terribly mistaken vanity. Call it false pride, shame, oversensitiveness or what you will: The fact remains that millions of persons have a deep-rooted, inexplicable prejudice against mechanical hearing aids and will not investigate them until they have wasted their money on quacks and nostrums, ruined their disposition and tried the patience of friends and family beyond endurance.

Such persons do not know, perhaps, that the modern hearing aid is practically invisible—much less conspicuous for instance than a pair of eyeglasses. The tiny earpiece is scarcely the diameter of a penny; women can conceal it under the hair. If worn under a dress with a frilly jabot or scarf, the 4 ounce microphone is successfully hidden. One manufacturer makes a necklace, available in pearls, gold or gunmetal beads, which contains the necessary wires for sound-conduction. Complete concealment is thus made possible, with no diminution of efficiency.

Men who wear a modern hearing device regard the small, visible button in or behind the ear as a badge of courage and determination to overcome a grievous handicap. After a few weeks they forget they are wearing them; every one else forgets it, too. As Rupert Hughes, the novelist, said to his fellow members of the American Society for the Hard-of-Hearing, "The day is past for a hard-of-hearing person to cling to solitude and slink through the world missing half of life because of a false sense of shame." On his own lapel he proudly wore a 3 ounce microphone, one of his several electrical hearing aids.

Hearing aids are still comparatively high priced; improved methods of production and distribution and an increase in the volume of their use will inevitably bring the price down. But the price of any instrument which carries with it a ticket of admission to normal life cannot be regarded as "high."

America is awakening, individually and socially, to the menace of deafness. Physicians, the public and manufacturers of hearing devices are cooperating to prevent, aid and repair hearing losses. In this war on deafness, the American Society for the Hard-of-Hearing, with 175 local units, is the spearhead of attack. Its chief program is to forestall by aural prophylaxis hundreds of thousands of new cases of deafness. The society stresses the necessity of periodic tests of school children to determine the number of children with defective hearing; in eleven states such examinations are now required by law. In many children, the cause of hearing deficiencies is found in infected adenoids and tonsils; timely surgical intervention can prevent the spread of this infection along the Eustachian tube to the middle ear. Children's "earaches" should not be lightly regarded; take the child to an ear specialist, who will probably open the eardrum bulging with middle-ear pus. The infection will subside and the drum heal again without injury to the child's hearing. Children must also be taught not to pick their ears with their fingernails or with hairpins, toothpicks or other sharp instruments.

Many cases of deafness could be prevented by prompt medical attention. Scarlet fever is a typical example, notoriously destructive of auditory nerve function. Have your physician make a careful examination of your children's ears after this disease. Hay fever and other nasal allergies must be considered as a potential source of ear infection. Many inflammations and abscess formations are now being controlled by the new drug sulfanilamide used under careful medical supervision. Wherever it is possible to reduce the incidence and severity of any disease, such as diphtheria, pneumonia, mumps,

whooping cough—all of which may attack the ear—a real advance in the war against deafness has been achieved.

The menace of deafness, which now claims one person in fifteen, will not easily be dispelled. Many years must elapse and accumulated small gains be made before a new understanding of ear health can be attained. Diet, noise abatement, early and adequate diagnosis of ear ills and a still more rigid control of contagious diseases are some of the factors entering into the great program of ear conservation sponsored by the American Society for the Hard-of-Hearing. But for the present, the millions who are already deafened or who are losing their hearing should take advantage of the excellent hearing devices now available. Only false shame and an unworthy attitude toward their handicap debars them from enjoying the normal hearing that has been made possible by the recent advances in the field of electrical hearing aids.

FRIGHT and "COLIC"

The piercing outbursts of screaming in a young infant, commonly called "colic" and attributed to abdominal pain, may be due merely to sudden fright or startling, to which the baby is especially susceptible during the period from 1 to 5 months of age, Frank C. Neff, Kansas City, Mo., contends in *The Journal* of the American Medical Association. Thus, in the management of the condition, proper handling of the baby and the establishment of absolute quiet are more important than changes in the feeding regimen.

The assumption that colic is due to abdominal pain has led many persons to attribute it to some defect in the infant's food supply or eating habits. Yet the intensive crying which is the baby's only manifestation occurs in thriving infants as well as in those who may not be gaining, in breast-fed babies as well as in the bottle fed.

True colic, or actual pain in the abdomen, may be a serious disturbance. However, the condition commonly termed colic is of much less consequence. The most logical explanation for it, the author believes, is based on the observation that the normal infant passes through a period of excessive tension or excitability from 1 month of age to 5 months. The screaming that occurs during this period, he believes, is often associated with the "startle reflex," sometimes called the "embrace reaction." This phenomenon can be brought about by striking the sides of the crib or the mattress close to the infant's head. It appears about the sixth day of life, reaching its height at about 1 month and persisting for 3 months or more. It consists of a prompt spreading of the arms, followed by a bowing or arching of both of them as they are brought forward toward each other, often with an accompanying vibration of the forearms. Crying usually accompanies this manifestation, which is probably dependent on frightening the child.

"The most important factor in controlling so-called colic is the establishment of absolute quiet," Dr. Neff declares. "The infant should be kept in a well ventilated and softly lighted room; there should be freedom from overdressing and from unhygienic conditions, such as wet soiled clothes," he says. "Many of these infants cry all during the arduous daily bath, which should then be reduced to a few minutes.

"A minimum of attention directed by adults toward the infant will quiet the condition. All handling should be done slowly and without startling. It should be borne in mind that the 'colicky' baby should not be jiggled, rocked or shaken.

"When the feeding time comes it is well for the mother to take the infant to a quiet, dimly lighted bedroom where nothing will interfere with the natural drowsiness which should develop by the time the food is taken. With the child held nearly upright during the feeding less air is swallowed, and its escape is favored early.

"In addition, sedative drugs are sometimes needed and are found to act promptly and often spectacularly."

The scientific study of man is the most difficult of all branches of knowledge.—*Dr. Oliver Wendell Holmes.*

INDEX
to HYGEIA
ADVERTISEMENTS

Allcock Mfg. Co. (Manicare) ... 549
Beverly Farm, Inc. ... 573
Breakstone Bros., Inc. ... 542
Child Welfare Guild ... 559
Church Grape Juice Co. ... 542
Clapp, Harold H., Inc. ... 557
Durkee Famous Foods, Inc. ... 542
General Foods Corporation (Post's 40% Bran Flakes) ... 544
General Foods Corporation (Postum) ... 541
General Mills, Inc. ... 3rd cover
Greystone Press ... 553
Guild of Prescription Opticians of America ... 562-563
Heinz, H. J., Company ... 543
Hygeia Nursing Bottle Co. ... 559
Hynson, Westcott & Dunning, Inc. ... Back cover
La Loma Feliz ... 573
Lever Brothers Co. ... 555
Libby, McNeill & Libby ... 535
Luzier's, Inc. ... 547
Maiden Form Brassiere Co. ... 569
Mead Johnson & Co. ... 481
Metropolitan Life Insurance Co. 536
Moran Shoe Company ... 558
Morton Salt Company ... 538
Multi Products Co. ... 545
National Pressure Cooker Co. ... 539
Num Specialty Co. ... 558
O'Leary, Lydia, Inc. ... 551
Parke, Davis & Co. ... 2nd cover
Phillips, Dr. P., Canning Co. ... 542
Pogue School, Mary E., The ... 573
Popular Photography ... 553
Rose-Derry Company ... 560
Sadimin Company, The ... 553
Soft Life Lens Co. ... 485
Squibb, E. R., & Son ... 483
Sun-Rayed Company ... 542
Tampax Incorporated ... 567
Taylor, Frank F. Company ... 559
Tre-Zur Brassiere Company ... 571
Trowbridge Training School ... 573
Van Camp Sea Food Co., Inc. ... 542
Wilson Schools ... 573
Worcester Salt ... 539

FREE BOOKLETS

and attractive offers of samples are featured in many of the Hygeia advertisements. Remember that all advertisers welcome your inquiries.

Medical News OF THE MONTH

Sanitation in Restaurants

Drying dishes by hand towels has no place in any system of dishwashing in public eating places, *The Journal* of the American Medical Association says in an editorial summarizing a report of a survey on effective sterilization of utensils in such establishments.

The study confirms the effectiveness of chlorine as a sterilizing agent but warns that the mere dipping of unwashed glasses in a chlorine solution without previous cleaning is insufficient, though frequently done in beverage rooms. It also emphasizes that two sinks are necessary for prophylaxis.

Oxygen for Angina Pectoris

Breathing a high concentration of oxygen will ease the pain associated with a blocked heart artery [coronary thrombosis] and with angina pectoris [chest pang], Edward W. Boland, Los Angeles, states in *The Journal* of the American Medical Association. He says that this action of oxygen is not generally recognized, although it is well known that the functions of the heart and respiratory systems are supported by it. Oxygen, he continues, will often relieve pain not alleviated by large doses of pain-killing drugs.

Bicycle Pedals

Elevating the foot of the patient's bed for from twenty-four to forty-eight hours after a major operation and then having the patient exercise on ordinary bicycle pedals mounted on the foot of the bed will help stimulate the retarded blood circulation which follows major operations and thus help avoid the formation of blood vessel obstructions which might prove fatal, Geza de Takats and Joseph H. Jesser, Chicago, report in *The Journal* of the American Medical Association.

They recommend that the patient, except in certain types of operations, pedal for five minutes three times a day, starting about the third day after operation. This exercise and the elevating of the bed immediately after the operation help promote the flow of blood back to the heart. Retarded blood flow and the resulting stagnation are predisposing factors in the forming by coagulation of a plug or clot in a blood vessel or in one of the cavities of the heart. When the clot remains at the point of its formation the condition is known as thrombosis. The blocking of a blood vessel by a clot or obstruction which has been brought to its place by the blood current, frequently from a thrombus, is known as embolism. Either condition may prove fatal.

School Doctors

The replacement of "medical inspectors" by "school medical advisers" in an increasing number of schools throughout the country is one important evidence of the progress that is being made in the integration of health activities in the school program, Charles C. Wilson, Hartford, Conn., observes in *The Journal* of the Indiana State Medical Association.

The old-time "medical inspector," he points out, examined pupils for signs of communicable disease but gave little attention to other health problems. His work was an isolated activity with little connection with the health program of the rest of the school.

By contrast, the modern school medical adviser participates in various activities connected with health in the school. His work may range all the way from offering advice on the health factors responsible for the poor school work of certain pupils, to the recommending of standards for lighting, seating, heating and drinking fountains.

Eating False Morel "Mushroom" Unsafe

Even though the false morel, a type of so-called mushroom, has been eaten by many persons without harm, its poisonous properties are so variable that its consumption is unsafe, H. V. Hendricks, Kalkaska, Mich., warns in *The Journal* of the American Medical Association in reporting a death and a case of illness due to eating this plant. The principal danger seems to be that a considerable number of persons have eaten the plant with impunity, inasmuch as actual confusion between the true and the false morel can hardly occur.

Eliminating Rats Isn't Sufficient

The Pied Piper who drives out rats, and lets it go at that, is performing only half of his duty. Nowadays his piping has to charm rat fleas or mites as well, or one pest will merely be replaced by another.

In *The Journal* of the American Medical Association, Leonard F. Weber tells of five department store employees who consulted him for bites and skin inflammation from scratching. Some factor in their working environment was evidently responsible, as no other members of their families had any skin disease.

Questioning revealed that the only change in their working conditions recently was to rid the store of rats. With this fact in mind the author examined the patients at the store and found mites on their skin, which he identified as rat mites. He showed that when the employees went into the stockroom of the store the mites crawled from their hiding places on to the skin.

Thus the author concluded that the mites turned to the human beings for food when their natural host, rats, had been driven out. Fumigation with hydrocyanic acid gas destroyed the parasites.

Addenda

On this page in the April issue appeared an abstract of an article on the use of karaya or Indian gum in certain products, including some brands of junket. "The 'Junket' Folks" of Little Falls, N. Y., write that there is no karaya gum in any of the flavors of "Junket" Brand Rennet Powder or in "Junket" Brand Rennet Tablets.